

SOUTHERN NEJD.

BY

H. ST. J. B. PHILBY.

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JOURNEY TO KHARJ, AFLAJ, SULAIYYIL, AND
WADI DAWASIR IN 1918.

By H. St. J. B. PHILBY, I.C.S.

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A TRIP TO SOUTHERN NEJD AND WADI DAWASIR.

PREFATORY NOTE.—*The first twenty-one pages only have been revised in proof by the author. For the rest, editors and printers have had to do their best alone with pencilled copy which had been a good deal rubbed in transit. So far as possible no change has been made by the editors in the author's words, phrasing, or Arabic transliteration. The accompanying map is a reduction of that supplied by the author, the Survey of Egypt having redrawn his chart on a scale of 1:1,500,000, omitting minor place-names in the interest of legibility.*

After an interlude of two and a half months since my departure from Jidda I returned to Basra on March 24, 1918, with the idea of proceeding *viâ* Kuwait to rejoin Ibn Saud wherever he might be. My plans were however changed at the last moment by the arrival of messengers from Dhari ibn Tawala of the Aslam Shammar, who was encamped at Al Hafar in the Batin, and I decided to resume my travels by way of the Batin. Accordingly on March 28, I proceeded to Zubair and on the following day accompanied by Dhari's messengers and a scratch escort, provided by Sheikh Ibrahim, I launched out into the interior. Five days' march down the Batin, now resplendent with all the flowers of spring, brought me to Dhari's camp just short of Al Hafar, whence after a two days' rest I set out again with Dhari himself and a large escort of sixty Shammar for Shaib Shauki, where according to report I should find Ibn Saud in his annual camp of exercise. Passing the wells of Al Hafar (about 145 miles south-west of Basra) we proceeded a short way up the Batin and then launched out southward into the Dibdiba. For the next three days we pushed on over the vast bare desert plateau now under the name of Dibdiba, now Juraiba, now Summan and now Rubaida, each merging imperceptibly into the next and distinguished from it by some slight difference of soil or vegetation, until on the evening of the third day we crossed the Manshariha or main road from Kuwait to Zilfi, and camped a couple of miles south of it on the edge of the Dahana. The next day was spent

in negotiating the Dahana sands, which were again disappointing, and appeared to offer no great difficulty to travellers, though the parallel ridges were more in evidence than at the southern crossing on the Hasa-Riyadh road. After the rains, vegetation was exceedingly abundant, and our track led over the ridges at points where ascents and descents were reduced to a negligible minimum. The same evening we camped on the edge of the Arma plateau, and next morning, making a detour to the wells of Qaiyya to replenish our supply of water, we struck thence south-eastwards down the Arma plateau until late on the following afternoon, namely April 11, we arrived at Shaib Shauki, a pretty little ravine running down from the western edge of Arma eastwards towards the Dahana. Passing down the Shaib, whose bed was studded with pools of water as the result of winter rains, we soon arrived at Ibn Saud's camp, a vast concourse of white tents scattered in groups of 100 or more over a level stretch of plain astride the Shauki.

Ibn Saud, who was at Hasa when he received news of my movements, had fortunately arrived the same morning, and I remained with him concerting plans for the future until the morning of April 16, when the march of the standard to Riyadh began. I accompanied the march, which was by slow stages and immensely impressive, the great gathering comprising all told not less than 1,000 camels, and marching in groups with the standards of Ibn Saud and the various local contingents heading the procession. Proceeding southward down the Arma, we reached and followed up the course of the Shaib Atsh, in a south-westerly direction, until we emerged on to the plain of Khafs, whence, following along the western escarpment of the Arma plateau and striking across a long narrow belt of Nafudh, known as Arq Banban, we entered the tumbled mass of low hills—Mugharrizat, Abu Makhrûq, etc.—which bar the northern approaches to Riyadh.

I re-entered Riyadh on April 19, and the plans concerted between myself and Ibn Saud contemplated a visit to the Qasim towards the middle or end of Ramdhân. I little relished the prospect of spending the whole of the intervening period in the sultry puritanical atmosphere of the capital, and accordingly proposed to my host that I should employ part of it in a visit to the south. To my delight and surprise Ibn Saud agreed to my doing so, and promised to make the necessary arrangements,

but I think that on reconsideration he repented of his decision. The days passed by, and my cautious enquiries from people about the palace failed to discover any sign of active preparation. The climate was still pleasant enough owing to a succession of thunderstorms which rolled up every evening over the broad back of Tuwaiq to pass over the city on their northerly course, and I was anxious to make a start before the weather changed to summer conditions. When April gave way to May with still no sign of preparation, I took courage to broach the matter to Ibn Saud, whose reply confirmed my suspicions, but I was not going to be baulked a second time, and began to be importunate with complete success. Orders were now given for the camels to come in and, on May 5, I received the glad news that we should start on the morrow. That night Riyadh enjoyed the last thunderstorm of spring.

On the morning of May 6 I rose early hoping for an early start while it was yet cool but I was yet to have two interviews with Ibn Saud in the course of which he gave me much parting advice including an injunction to give Hariq and Hauta as wide a berth as possible owing to the savage insularity and fanaticism of their people—of whom more hereafter. At 9.30 a.m. taking a final farewell of my host I issued forth from the palace gate and was soon beyond the walls of the city with some twenty-four companions. Of these only two were of my former party, Ibrahim unfortunately being again in charge, while Tami the Camel, a delightful person of the Shammar Aslam, who has accompanied every recent British visitor to Nejd, again proved to be the life and soul of the party. Of the rest a Sheikh of Al Murrah named Jabir was a conspicuous character, having thrice traversed the Great Desert from his home in Jabrin to the southern sea, each time of course on raids against the tribes of the coast; the Ateiba, Qahtan and Dawasir each contributed one representative while of the last named tribe we picked up casual guides from time to time during the journey. The Shamir branch of the Yam provided a guide for the first part of the journey and Saad ibn Jilham, a man well over sixty who remembers the closing period of Feisal's reign, accompanied us as an expert in the affairs of the south, with whose administration he has been intimately associated over a long period. The rest of the party consisted of oddments, servants, etc.

Our course lay southward down the storm channel of the Shamshiya torrent, the most important of the several streams which run down from the tumbled masses of low hills round Riyadh irrigating the palm-groves of the oasis. The latter consists of three belts of palms namely Riyadh itself, Manfuha and Masana, separated from each other by narrow strips of bare ground and situated in the order given from north to south in a shallow basin bounded on the north and west by the Abu Makhrûq and Mugharrizat hillocks, on the east by the ridge and slope of Daraibat al Khail*, and on the south by the Wadi Hanifa, which, issuing from a deep gorge in the slope of Tuwaiq at a point called the Batin about two miles south-south-west of Riyadh, runs thence south-south-east along the eastern edge of the gentle slope of Tuwaiq in a valley about one mile broad. The southern extremity of the palms of Masana impinges on the left bank of the wadi at the point where the Shamshiya torrent runs into it.

We marched along the eastern edge of the oasis leaving the modern town of Manfuha on our right at about one and a half miles out from Riyadh, and thence followed close along the ruins of the wall of the ancient town, which to judge by the extent of the area covered by the debris of walls and houses must at one time have been of very great size, immeasurably greater than modern Riyadh. Still keeping the oasis on our right we left the village of Masana buried in its palm-groves about half a mile to our right and at a distance of about three and a half miles from the start passed the *qasr* of Mizal, the last habitation of the oasis, and entered the valley of Wadi Hanifa. Our course now lay more or less down the middle of the valley, where the going was good, the main storm channel of the wadi running parallel to us a short way to the right, while a number of lesser streams flowed down parallel to it on either side.

About five miles out from Riyadh we passed through a clump of dwarf palms dotted here and there with the ruins of the long forgotten village of Jiza, one, if tradition speaks true, of an unbroken series of settlements extending from Ayaina in the upper reaches of Wadi Hanifa down the valley of the latter to Kharj in the south, but that was in times very remote whose prosperity was shattered by a divine visitation of plague

* Wrongly called Mugharrizat in previous report.

and locusts. It is even related of those times that the news of the birth of a son to a notable of Ayaina reached Yamama the same evening passed on by word of mouth from housetop to housetop down the valley. The legend of the past glory and destruction of the valley is vague enough and the absence of extensive remains in that part of it, which lies between Riyadh and Kharij, makes one sceptical unless the true explanation be that the havoc was caused by one of those sudden visitations of terrific flood which, there can be little doubt, descend at rare intervals on this part or that of the Arabian peninsula. Such a catastrophe alone could have swept away all signs of such prosperity as the valley is reputed to have enjoyed. In more recent times Jiza was utterly destroyed by the invading army of Ibrahim Pasha and still more recently was the scene of a furious conflict between the sons whom Feisal left to wrangle for his throne.

For the next two and a half miles we marched now on the right and now on the left bank of the wadi, henceforth a single stream, until we reached a considerable widening of the valley caused by the confluence therewith of the Shaib Dakina from the low hills on the left and the Shaib Baqra from the Tuwaiq plateau on the right. At the junction of the former with the wadi are a number of qasrs and wells standing amid extensive cornfields cultivated by tribesmen of the Suhul and Subai; who range from the Arma plateau in the neighbourhood of Shaib Shauki and Hafar al Atsh on the east (extending for grazing to the Dahana and Summan beyond) to the Wadi Hanifa on the west from Dakina to Hair inclusive. Ibn Saud has recently tried without success to form an Akhwan colony here.

Resting for a while on the banks of the Baqra we continued our march in the afternoon and, one and a half miles further on, found the slopes on either side closing in on the wadi, which from this point runs down in a narrow bed between deeply eroded banks rapidly increasing in height. We kept to the road which, avoiding the bends of the tortuous channel, strikes across the slope on its left bank for about two miles when it drops by a steep rock path into a little Shaib called Hifna and re-enters the wadi almost immediately.

From this point we marched along the wadi bed, varying from thirty to 100 yards in breadth between imposing weather-worn crags from fifty to 100 feet high and in parts covered with

dense vegetation, mostly poplar and acacia, for four miles to Hair where we camped for the first night. On the way we passed two groups of wells in the wadi bed known as Hifna and Arair respectively, which had been utterly destroyed by recent floods and will have to be reconstructed *de novo* before they again yield water.

Hair is an exceedingly pretty oasis, fifteen miles south-south-east from Riyadh by the direct road, which we had followed, and situated in a + shaped confluence of important wadis—the Wadi Hanifa entering the oasis from nearly due north and issuing from it in the direction of due east, the Shaib Ha entering it from due west with, it is said, the drainage of the Dhruma valley, and the Shaib Baaija joining the confluence from due south with the drainage of a considerable part of the Tuwaiq plateau. The densest part of the oasis consisting of palm-groves, poplar clumps and tamarisks, collected round a large pond of torrent water, lies at the point of confluence, on the west side of which under a high crag is the village itself in two sections of no great size, one walled after a fashion and the other but a straggling group of mud-built dwellings. The palm-belt extends westward up the Ha and eastward down the Hanifa for about one mile in each direction, while the beds of the Baaija and northern part of Hanifa are devoid of cultivation. The pond in seasons of good floods is said to retain water practically throughout the year, while at the time of our visit, the last flood of the season having come down the Hanifa not more than ten days or a fortnight before, a gentle, but steady flow was still proceeding from it down the wadi, ending in another pond of smaller dimensions at the end of the oasis. The perpendicular weather-worn bank of these streams, rising to a height of about 100 feet above the level of their beds hem in the oasis in every direction, watch towers being disposed in dominating positions on their summits to give warning of the approach of foes. I have already noted that the oasis belongs to Suhul and Subai Badawin, whose interest in the place is limited to their annual visit to collect the dates when ripe, while for the rest of the year the permanent population of perhaps 300 or 400 tenants, mostly negro freed men, have the oasis to themselves to dig and delve therein in return for the tenants' share of its fruits.

We resumed our march on the following morning down the Wadi Hanifa which now ran due east between high cliffs from

200 to 300 yards apart. A number of wells dotted about the valley for about two miles beyond the last palm-grove of Hair are collectively known as Afja. At the end of the Afja tract the banks of the wadi rapidly decreased in height until the valley, now choked with sand dunes here and there, spread out to a width of half a mile or more. On the right the gentle slope of Tuwaiq merged imperceptibly in the sand dunes, while on the left lay a rough broken upland rising gradually to a low ridge known as Zuwailiyat sloping down on the other side to Wadi Sulaiy beyond which ran the Jubail ridge with its three prominent headlands—Khashm al An, Khashm Hith and Khashm Jubail. At a point about six and a half miles from Hair we avoided a wide bend of the valley which had now resumed a south-easterly direction, by following the track along the lower slopes of the hills on the left, re-entering the wadi four and a half miles further on and leaving it again three miles further down to spend our midday siesta on the sand ridge of Duwaira on the right bank. The scene in this neighbourhood was a bewildering series of ridges converging on the valley. The Tuwaiq plateau was now well back on the right and all that remained of it was a series of ridges projecting from it in the direction of the wadi while on the left bank the Jubail ridge formed the background to a series of bumpy ridges, between which numerous shaibs flowed down to merge in the main channel of the wadi, now struggling through a mass of sand hills ever growing denser.

A march of seven miles in the afternoon over monotonous ridge and valley with the wadi running parallel on the left brought us to the single well of Hufaira standing in a patch of hard limestone and containing plentiful but somewhat foul water at a depth of five fathoms. The Hanifa valley was now about one mile broad at the point where the Wadi Sulaiy joins it, the combined wadi being backed by a low ridge called Shadida, which had been pointed out to us from the Turabi plain between it and Arma during my first journey to Riyadh. For the remaining four miles of the day's march our course was flanked on the right by the long low ridge of Firzan, at the end of which we camped for the night on the threshold of Kharj, forty miles from Riyadh.

The same evening I obtained a fine view over the whole length and breadth of the Kharj district and eastward down the

Sahaba from a hillock of the Firzan ridge, and the three following days (May 8 to 10) were spent in visits to practically all the settlements of the valley, great and small. On the evening of May 10 I passed out of the district having covered some fifty miles in my wanderings from place to place.

The Kharj valley is a long depression sloping down from south to north with a slight easterly inclination especially at the northern extremity. In length is about thirty-five miles from south to north; its greatest breadth is about eight miles in its northern half while to the south it tapers almost to a point, where the converging of the hills on either side leaves a narrow gap for the passage of the Ajaimi torrent. It is bounded on the north by the Wadi Hanifa, on the west by the extremities of the Alaiya section of the Tuwaiq range and on the east by the outer rim of the vast desert upland of Biyadh, a stony, barren, waterless tract, beyond which, many days journey from Kharj, lie the first sands of the Great Desert. Southward beyond the apex of the valley extends a wide plateau in which the Ajaimi comes into being out of the gathering of countless streams from east and west. At the north-eastern extremity of the valley lies the head of the Sahaba depression, which to all intents and purposes is but a continuation of Wadi Hanifa augmented now through the medium of the Kharj valley by the drainage of some of the most important arteries of Central Arabia. Of Wadi Hanifa which brings down the drainage of the northern part of the Tuwaiq plateau and of the Dhruma plain as already noted no more need be said; next to it comes the broad channel of Shaib Nisah, which rising in the eastern section of Nejd proper (*i.e.* west of Tuwaiq) near some high hills called Bukhara, lying to the southward of the series of Nafudhs crossed by me on my previous journey, traverses the Tuwaiq range between the Aridh and Alaiya sections by a broad level crossing and runs down into the Sahaba past the Firzan ridge and the oasis of Yamama; south of the Nisah the Alaiya section of Tuwaiq is drained into the Kharj valley by scores of gorges and ravines, great and small, collecting at the edge of the plateau into two main streams called Shaib Ain and Shaib Saut, which enter the district near Naajan and Dilam respectively, and run down its centre into the Sahaba. Next in order southward comes Wadi Fara, the continuation of Shaib Majma, in which lie the great oases of Hariq and Hauta, after its junction with Shaib

Faria, in which is the oasis of Hilwa; the Fara, dividing Alaiya from the southern part of Tuwaiq drains part of both sections into the Kharj valley at a point south of Dilam. Finally there is the Ajaimi which, besides collecting the drainage of a number of streams flowing west from the Biyadh, drains the southern Tuwaiq plateau for about fifty miles from north to south and receives the outflow of Wadi Birk, another great level crossing, draining the quadruple range of western Nejd *viâ* Wadi Sirra along the northern edge of Nafudh Dahi through the barrier of Tuwaiq eastward to the Ajaimi. From the above it will be seen that the Sahaba is eventually the sole drainage outlet of the whole of what we may call Central Nejd, *i.e.* the tract lying roughly between Longitude 44° and $47\frac{1}{2}^{\circ}$ and Latitude 23° and 26° . As to its onward course it is fairly safe to presume that it very seldom carries water as far as, and still more seldom across, the Dahana, though there seems no reason to doubt the truth of local report that its course through a depression in the sands is easily traceable. It is idle to speculate whether it ever reaches the sea—it would certainly do so given a sufficient volume of water. Its general direction from Kharj onwards appears to be somewhat south of east.

It is not surprising that Kharj, saturated as its soil must be by the floods brought down into the valley year after year by the great drainage system above described, is or, rather I should say, once was, a fertile tract renowned for its prosperity. That prosperity is but a dim memory now, having long given way to decay which broods over the scattered evidences of a glorious past, inscrutable as Fate, and is intensified by a century of strife only recently ended. Yamama, that great city of the past, is choked with sand; Firzan and a nameless city on the eastern ridge, both of an older date than Yamama, are now but heaps of debris, and the life-giving springs of water are nearly dead from disuse or misuse—in fact the northern section of the valley is a sorry sight and the scene of prosperity, on a greatly modified scale, has shifted to the central part of the district where Dilam, the modern capital, is surrounded by a number of fairly prosperous settlements, entirely dependent on wells.

Apart from the fact that it is one of the most important drainage collecting centres in Arabia, the distinctive features of the Kharj valley, whose height above sea-level rises from

1,400* feet at the north-eastern corner to some 1,700* feet at its apex to the south, are the springs of Firzan with the subterranean aqueduct or Kariz of the ordinary Persian type here called Kharaz or Saji (Saqi) leading from it to the gardens of Sulaimiya and a series of three bottomless, presumably spring-fed reservoirs, from one of which flows a perennial but exiguous supply of water in a narrow open channel called Saih, which irrigates the lucerne fields of Ibn Sauds' stud farm of Qurain, while subterranean aqueducts like that of Firzan but now run dry connect the other two with the same channel. These reservoirs, known collectively as the Aiyun of Kharj, are situated close together about six miles south of Sulaimiya under the cliff of the Biyadh, the central reservoir called Ain Al Dhila lying in a gaping cleft at the foot of the cliff itself; and it is, I firmly believe, to them that the district owes its name, though local etymology is not with me and derives the name from the fact that in days long past this valley was the source (Makhraj) of the corn supply of Mecca. I base my opinion, which involves a change of spelling (namely Kharq meaning a cleft) but none of pronunciation, on the analogy of the name of Aflaj derived from a precisely similar phenomenon, on that of at least three localities called Khafs, all of which are named from natural reservoirs in great rock clefts attributed to the falling of stars, and generally on the fact that Arab geographical nomenclature is so largely based for very natural reasons on phenomena affecting the water supply. An actual instance of the use of the word Kharq to signify a cleft of the kind is supplied by the extraordinary grotto hill called Makhrûq which is one of the sights of the Riyadh oases.

However, whatever the etymology of the name may be, there is no doubt that these two sources of perennial irrigation were the backbone of the district in the past and the cause of its great prosperity. Each of them is overlooked by the debris of a forgotten city, the one astride of the northern extremity of the Firzan ridge and the other on the summit of the cliff behind the reservoirs. The very situation of these cities, raised well above the level of the plain in strange contrast to the settlements of the present day huddled up in the middle

* These and all like figures will probably have to be reduced as my aneroid on this occasion gave 1,950 as the lowest height of Riyadh, whereas on my previous journey my results placed Riyadh at only 1,750 feet above sea-level.

of the various oases, suggests the sojourn of an alien race. Moreover the debris that remains is not of the mud buildings known to the modern Arab but of stone and mortar, disposed in countless circles of various sizes, each outlined by large blocks of stone round its circumference, the interior space being filled in with rubble and mortar and generally traversed by a diameter of stone blocks similar to those of the circumference. The circles rise to a point at the centre about four or five feet above ground-level giving the appearance of a vast number of cairns set in rows along the slopes of the ridge. Their average diameter seemed to be about six to ten yards, while the biggest I saw was no less than forty-five yards across and about six feet high in the centre with huge blocks of rock round the circumference and a traverse of similar blocks running north and south across it broken by a central gap facing east and west; in the interstices between the traverse and the circumference lesser circles were scattered about. Of the two groups of ruins that of Firzan is the more perfect and distinctive owing to the greater use in its construction of large blocks of stone, whereas, the circles of the other are largely of rubble and smaller stones. Finally the effect of foreign influence is enhanced by the solid workmanship of the subterranean aqueducts and the intricate irrigation system of which they form part; the type is found elsewhere in Arabia in the Aflaj district, at Qatif and doubtless at other places, and there can be little doubt that the Kariz of Qatif dates back to times when Persian influence was predominant on the coast. Is it possible that Kharj itself, and, if Kharj, the Aflaj also, owed ancient prosperity to Persian settlements, long since wiped out by successive waves of Arab invaders from the south? It seems to me not altogether improbable that the very name of the race which prospered in this fertile valley in the days of yore still survives in a form corrupted by forgetful centuries, Firzan—Fursan—the Persians.

So much for ancient Kharj—a promising field for some enterprising archæologist of the future. Mediæval Kharj or Yamama*, as it was then called in deference to its great capital, seems to have occupied very much the same portion of the valley,—namely the northern quarter—as the original settlement and it is reasonable perhaps to assume that the Arab

* This name was alternatively applied to the whole Tuwaiq district at one time, with capitals at various times at Majma (in Sudair) Ayaina, Daraiyya Ghatghat, Riyadh and Manfuha.

conquerors (for Yamama was undoubtedly an Arab city as the scanty remains of its mud walls and houses testify), having driven out the original settlers, themselves settled down to enjoy the fruits of their labour. The capital was Yamama comprising an immense city surrounded by palm-groves of corresponding size; Sulaimiya probably existed as an outlying suburb and large cornfields doubtless extended southward for a considerable distance up the valley and along the right bank of Wadi Hanifa. Whether outlying palm patches and villages existed on the sites of modern Dilam and Naajan it would be difficult to say: it is not improbable that they did, but it is certain that Yamama contained the bulk of the population of the district including the court and palace of a once powerful king. How it came to fall will probably never be known. War and pestilence are possible explanations, but the situation of the city low down on the right bank of Wadi Hanifa tempts to the theory that it was laid low by some appalling flood, which, sweeping the great city before it, passed on leaving behind it a trail of sand to complete the destruction of what remained of the city and its palms by a process of slow encroachment not yet complete. The irrigation system doubtless suffered considerably at the same time.

Thus perished mediæval Yamama the remnants of whose inhabitants probably sought safety from the floods by migration up the valley where they founded the present capital of Dilam and the villages around it and whence doubtless they returned cautiously and by slow degrees to the scene of the great disaster to repair such damage as was not irreparable and to live again amid the wreckage of their former glory; but Yamama has never recovered from the catastrophe and probably never will. During the past century Kharj has been the scene of perpetual strife, in the course of which the aqueducts have been partially destroyed time and again, but an era of hope dawned again for the district with the establishment of Ibn Saud once more on the throne of Riyadh and already considerable progress has been made in the task of restoring the irrigation system to something of its former vigour. The Firzan Kariz was undergoing repairs at the time of my visit and when restored will give new life to the moribund palm-groves of Sulaimiya, while the flourishing lucerne fields of Qurain are an earnest of what may yet be

accomplished if machinery can be brought into use to tap the inexhaustible waters of the three reservoirs for the benefit of extended cultivation.

Entering the Kharj district by the Wadi Hanifa route at the point where the ruins of Firzan and the spring are situated one follows the aqueduct for three miles to the first of the oases, namely Sulaimiya. Between the aqueduct and the Wadi Hanifa are two groups of wells called Budaia and Bida the former in a state of decay and no longer used, but the latter surrounded by a small area of cornfields with one or two scattered *qasrs*. Sulaimiya consists of a small village of mud huts situated in and near the northern end of a palm belt about one mile long from north to south and half a mile broad. The better palm-groves, most of which belong to Ibn Saud, are situated at the southern end of the oasis, which alone gets the benefit of irrigation by the Kariz, the remaining groves being watered by wells about five fathoms deep. A low wall with occasional ruined towers runs round the whole oasis and the village is walled in the sense that the contiguous back walls of the outer houses form a continuous barrier, through which entrance is obtained by gates at the northern and southern extremities of the main (and only) street. The population, which is of the ancient stock of Qahtan (Aiyidh section), including that of isolated *qasrs* scattered about the palm-groves, may number some 500 souls—perhaps rather more. The oasis does not convey an air of vigorous prosperity, dense palm-groves are the exception and other crops are those typical of the rest of Nejd—a few bushes of cotton, scattered pomegranate and peach trees, occasional clusters of vines with saffron, egg plant and barley to fill in gaps in the palm-groves. Sulaimiya is fortunate in being free of sand but was at the time of my visit enjoying a visit of locusts which swarmed over the plain but did not seem to be doing much damage.

Passing out of the oasis eastwards one almost immediately enters a broad tract of sand dunes, which, steadily becoming higher and higher, cover the three miles intervening between Sulaimiya and Yamama and extend beyond the latter to the head of the Sahaba. The oasis of Yamama is rather larger than that of Sulaimiya being about two miles long from north to south and one mile broad. North of it lies a regular Nafudh whose last wave stops abruptly at the edge of the palm-belt,

and from beneath which here and there peep out remnants of the walls and houses of the old city. Besides a number of scattered *qasrs* Yamama comprises four small hamlets built close together in a semi-circle in the middle of the oasis, which on the whole is more luxuriant than that of Sulaimiya and dependent entirely on wells about five fathoms deep, the water being drawn from the latter by asses and cattle of very diminutive and inferior breed and in some few cases by camels. The hamlets are walled, each about the size of or somewhat smaller than Sulaimiya and contain a mixed population, whose chief elements are Zaab (a section of Al Murrah) including the Amir, Beni Hajar and Aiyidh, of about 2,000 souls, who in addition to the groves of Yamama itself own two groups of wells, *qasrs* and cornfields called Hayathim and Munaisif about four miles away south-west up the valley.

The Nafudh tract does not extend south of Yamama, at one mile south-south-west of which lies the northern limit of the area irrigated by the Saih stream, a narrow strip of fertile land perhaps one mile broad and five miles long from the ruined *qasrs* of the northern extremity to the most southerly of the three reservoirs. In the centre of this tract about half a mile west of the Qusaia ridge of the Biyadh stands a large strongly-built fort, 150 yards long and 100 yards broad and provided with numerous towers and a single gateway, called Qurain, to the west of which lies about one square mile of lucerne fields. The remains of one or two ruined *qasrs* and the marks of former cultivation over a considerably greater area attest the former prosperity of the place. The fort contains living accommodation for Ibn Saud's master of the horse and a few servants and open stabling for about sixty or seventy horses. There were about fifty animals in the fort at the time of my visit including four stallions, a considerable number of mares, some foals, a mule or two and a camel, each tethered to a circular manger of mud piled high with lucerne. The animals are never exercised or cleaned, the stables are seldom cleared of refuse and all the greys were suffering from a disease called Dabbas said to be caused by a parasite brought in with the lucerne and to be harmless though unsightly. At the southern end of the Qurain tract lie the three reservoirs, namely Ain Samha surrounded by a wall of rock twenty feet high and measuring about eighty by forty paces, from a deep narrow fissure in the northern side of which flows the Saih stream ;

Ain al Dhila about 100 by seventy paces in extent with a sheer precipice of forty feet on the cliff side and walls of lesser height on the other sides, and Ain Mukhisa, a pretty pond surrounded by reeds and tamarisk bushes about 150 by eighty paces in area with banks about two or three feet high. As I have already noted the remains of subterranean aqueducts connecting these last two reservoirs with the Saih stream are still in evidence. Owing to the immense depth of these reservoirs, which in spite of countless attempts have never been fathomed, the water appears to be almost black though in reality extraordinarily limpid and transparent, a stone cast into it remaining visible for an incredible time.

Leaving the Aiyun one strikes across the valley over a tract of saline loam traversed by the extremities of the southern drainage channels until at a distance of three and a half miles from Ain Mukhisa one reaches the village of Dhabaa, an Akhwan settlement founded only last year by the Beni Amir section of the Subai on the site of an earlier settlement now in ruins. Round the village lies a considerable area of well cultivation, cornfields for the most part with scattered patches of miscellaneous crops—cotton, pepper, saffron and the like, and the village itself consists of an untidy straggling collection of mean mud huts grouped around a pretentious mosque of typical Wahhabi pattern with a Liwan or portico of seventeen pointed arches. In estimating the population of an Akhwan settlement one must bear in mind the fact that all Akhwan are Badawin and to a large extent retain their nomadic tendencies, using their permanent settlements mainly as rallying points for religious exercise at such seasons as Ramdhân and of course at harvest time (in their case the wheat harvest). Ibn Saud himself told me that the able-bodied Akhwan population of Dhabaa was 1,000, a figure which includes all males above, say, twelve years old: on the other hand the total number of rifles distributed to this village is said to have been only 300 while the existing mud huts certainly do not number more than 250. I should be inclined to estimate the population of the settlement at not more than 1,000 souls all told, many of whom have not yet begun to build, though the total may in course of the next few years rise to 1,500 or 2,000 souls if and when the whole of the Beni Amir section settle down more or less permanently.

From Dhabaa one passes south-west across the bed of Shaib Ain to the small oasis of Naajan one and a half miles distant,

near by to the east of which lie the scanty ruins of an older settlement said to be the original site of the village. The modern village surrounded by palm-groves is a strongly fortified compact little settlement with high walls and towers, about 120 by seventy paces in area with a gate in the centre of the western wall, and contains a population of about 500 souls. The oasis and village were occupied by Ibn Rashid as a base of attack on Dilam during an expedition into Nejd about 1904; but Ibn Saud moving down to Kharij with lightning rapidity passed the slumbering camp of his rival during the night and on the following morning when Ibn Rashid's forces moved forward against Dilam they were welcomed by an unexpectedly brisk fire from the outskirts of the Dilam palm-belt and fled back to Hail *via* Wadi Sulaiy.

At a distance of a mile from the southern extremity of Naajan begins a continuous stretch of cultivation about four miles long and of an average breadth of one mile, the most prosperous part of the valley, whose breadth is here reduced to about four miles on the one hand by an outcrop of rock called Khashm al Kalb ending to the north in the triple-coned hill of Abu Walad running parallel to the edge of Tuwaiq between it and Dilam, and on the other hand by a long narrow strip of Nafudh called Arq Dhahi running along the western fringe of the Biyadh with tongues of sand extending westward almost to the confines of the Dilam oasis. This cultivated tract is sharply divided into two sections, namely a northern section called Muhammadi consisting mainly of cornfields grouped in patches of twenty to thirty acres round detached *qasrs* and wells and of a small number of detached walled palm-groves, each self-contained with *qasr* and well, and a southern section comprising the oasis of Dilam, about two miles long and one mile broad and containing the finest palm-groves of the valley. In Muhammadi numerous threshing floors piled high with grain and chaff bore witness to an abundant harvest, the reaping of which had been completed several days before our arrival though we had left the harvesters of Riyadh still at work. The *qasrs* of this section must number about 100, each a square mud building with high walls loop-holed and turreted and its population may be about 1,000. The oasis of Dilam contains a considerable number of outlying buildings singly and in small groups of five or six nestling in the bosom of dense groves, while the town itself, the capital and

indeed the only town of Kharj, lies about halfway down the eastern boundary of the oasis open on that side to the valley and surrounded on the other sides by palm-groves. Surrounded by a high mud wall studded at frequent intervals with bastions of the same material and pierced by four gateways (one on the north side, one on the south and two on the west), Dilam is roughly an oblong in shape with an L-shaped recess at the north-east corner, the north and south sides are roughly 500 yards in length, and the east and west sides are 400 yards. The north and south gates are connected by the main street which traverses the whole length of the town, and is joined by side streets from the two western gates, the more southerly junction forming a *sug* of unpretentious proportions, between which and the eastern wall extends a blank space for the accommodation of caravans. The whole of the south-eastern corner of the town lying between this space, and the southern wall and the sections of main street and eastern wall between them is occupied by a massive fort, the residence of the Amir, while west of the main street, close to the fort, is the chief mosque. Viewed from the battlements of the fort the town looks less crowded and more regular in plan than most towns of Nejd and, though the *sug* does not convey the impression of doing a great deal of business, the general appearance of the place is one of solid prosperity; the total population of the oasis, which contains a large settled Dawasir element, being probably not less than 7,000 souls all told, and 8,000 if Muhammadi is included. The Amir of Dilam is invested with no formal authority over the villages of the Kharj valley, each of which has an Amir of its own, but in virtue of his position as Amir of the premier settlement, he is referred to on matters of federal importance by the other Amirs, and exercises a vague jurisdiction within the limits of the valley over the Badawin Dawasir, whose grazing area extends from Firzan—and indeed from the Arma and Dahana beyond it—without interruption down the narrow strip between the Tuwaiq on the one hand and the Biyadh on the other, through the Aflaj to Sulaifyil and thence to Wadi Dawasir. The plateau of Tuwaiq, southward of a line drawn due west from the Aflaj, and the Nafudh Dahi separating Nejd proper from the wadi, also falls within their area of exclusive grazing rights.

Striking southward on the morning of May 10 from Dilam we passed through, or close by, the three small villages of Bilaisa, Zumaïqa, and Furaih, the latter being about three miles south of the capital and the last settlement of the Kharj valley, though in former times there was another settlement called Mushairifa, now in ruins, beyond it. From Furaih a march of three miles south-south-east brought us to the edge of the Arq Dhahi Nafudh, in the middle of which lay two small lakes, called Khabar el Kudan, fed by a branch of the Ajaimi torrent, and said to contain water permanently. The Arq Dhahi at this point was about two and a half miles broad, rising to and falling from a central sand ridge of considerable height, which we traversed by a gap on a lower level.

Passing out of the Nafudh we visited the twin clefts of Khafs Daghara under the cliff of the Biyadh ridge. One of these is of little interest being a hole about thirty by twenty paces in extent half filled up with stones and other debris from the hillside; the other is a very curious and extraordinary phenomenon, being a gaping crevice in the side of the cliff about sixty by seventy yards in area, half arched over by the cliff and the remaining half open; its sides descend steeply some forty feet in the open section to a vast pool of water dark and transparent like that of the Aiyun, bottomless as far as is known and apparently extending far into the hillside in which direction frequent attempts have been made by Arabs to explore its mysteries without other result than the discovery of tunnels leading nowhere.

From the Khafs, we struck south-south-west for about fifteen miles up the Ajaimi valley, into which unimportant tributaries run down from both sides, with the Tuwaiq and its offshoots on the right gradually converging on the Khartam ridge, as the flanking cliff of the Biyadh at the point is called, until in due course we reached a confused mass of low hills down through which the Ajaimi flows down into the Kharj valley. Following the bed of the torrent, here a mixture of gravel and sand lined with tamarisks and other vegetation, we soon found ourselves on a plateau slightly elevated above the level of the Kharj plain and sloping down gently from the south. On either side the Tuwaiq and Biyadh gradually diverged south-west and south-east respectively.

We camped for the night about one mile above the exit of the Ajaimi under the great headland of Khashm al Khartam, towering some 500 feet above the level of the plateau, and the following morning with Kharj well behind us we set our course for the Aflaj. Now cutting across the plateau to avoid wide bends of the channel and now along the bed of the Ajaimi itself, dotted here and there with pools of refreshing water left by the floods of the past season, we steered south-west for about seventeen miles to a more or less permanent pool of water called Ghadir Halfawi, near which we camped for the night. At this point, some 1,950 feet above sea-level, the Ajaimi, whose source is not far off to the west in some low hills standing out from the Tuwaiq, is joined by an important affluent called Shaib Halfawi draining the western slopes of the Biyadh and having its source near a headland called Khashm al Mishash, below which lie the rough wells of Mishash al Niswan, from which it flows round in a wide semi-circle into line with the Ajaimi.

It is actually into the Halfawi in the first instance that flow the important drainage channels of Wadi Birk, Shaib Tilha, and Shaib Ahmara whose extremities we crossed the following day in the first four and a half miles of our march in the order given above. From the confluence of the last-named Shaib with the Halfawi we struck south-west across a bare level stretch of sandy loam for nine miles to the southern boundary of the plateau marked by a broad expanse of gentle undulating bare stony downs called Insalah, the extremities of which impinge on the Tuwaiq and Biyadh uplands on either side. Through these downs, whose general level is 2,200 feet above the sea, a number of unimportant streams, the last southern affluents of the Sahaba system, run down into the Halfawi at some distance eastward of the point where we left it.

Our onward course now lay along a well-beaten track SSW. through the Insalah downs, in times long past a scene of constant conflict between the various tribes—Dawasir, Al Murrah, Qahtan, and Ateiba—but now thanks to the firm rule of Ibn Saud remarkable for the security even of solitary travellers; seven miles further on the road climbs a low ridge on to another plateau (3,400 feet above sea-level) called Dhaharat al Rajd from an immense cairn erected on the road at the top of the ridge. The Rajd plateau, whose northern fringe forms the watershed between

the Sahaba drainage system on the north and a vast number of streams draining the slopes of the Tuwaiq and eventually collecting at some point south of the Aflaj settlements in the Ghail channel to flow south-east into the Biyadh, slopes gently southward and extends twenty miles from north to south and perhaps rather more from west to east between the Tuwaiq and the Biyadh. The northern part of the plateau is almost level and absolutely smooth and bare; but as one proceeds south it becomes more broken up by the passage of Shaibs and eventually it ends in a series of switchback ridges. Our march, interrupted by a halt for the night in a small nameless Shaib, ran practically due south to the end of the plateau, the more important channels crossed during the following day being Shaib Daiya, Shaib Shitab, Shaib Ghina, and Shaib Alars, the last of which containing some rough shallow wells of excellent water called Mishash al Ars. A bare mile beyond these wells the plateau, now about 2,100 feet above sea-level, ends abruptly at the edge of the Aflaj plain, in which the palms of Umm Shinadhir and Wusaila could be seen not far distant to the south-east. At this point the edge of the Tuwaiq plateau projects eastward to within about two miles of the road turning thence in a WSW. direction along the western boundary of the Aflaj plain, which is separated on the north-east from the distant rim of the Biyadh upland by a broad tongue of the Rajd plateau running south-east until it finally merges in the Biyadh itself.

Descending from the plateau we reached the twin villages of Umm Shinadhir and Wusaila after a march of five miles, at first across a broad, bushy depression running down from the edge of the Tuwaiq along the foot of the Rajd, and thereafter over a flat plain of loam with occasional patches of low sand dunes. The following day (May 14) brought us to Laila, where we spent May 15 and 16 visiting the various oases in its neighbourhood. On May 17 we marched by a circuitous route to Badia, where the following day was spent in excursions into the surrounding country, and finally on May 19 we passed out of the Aflaj plain. As in the case of Kharj it will be more convenient to deal with the district as a whole than to describe my route in detail.

But first a few words regarding Palgrave's claim to have paid a flying visit to Aflaj in the course of his peregrinations in Arabia in 1862—a claim, which must now after the lapse of over fifty years be dismissed as an impudent attempt at imposture

on both positive and negative evidence which seems to me irrefutable. In the first place by no stretch of the imagination can the Aflaj district be described as barren and savage (*vide* Vol. 2, p. 76): it is fertile and civilized. In the second place Palgrave professes to have reached Kharfa in two days from Riyadh: no route between the two places can be less than 140 miles in length—a distance to traverse which in so short a time would have required an effort nearly if not quite beyond the power of man or beast;* yet one is left to gather from his account that he experienced no great difficulty in performing the feat. Thirdly, the “villages” of Safra and Meshallah are fictitious of Palgrave’s imagination and neither has ever had any existence in fact. Fourthly, the oasis of Kharfa lies in a broad plain as flat as the palm of one’s hand and in no sense can the road to it be said to lie in a “gorge of some depth” (*vide* Vol. 2, p. 80), the rest of this passage being too absurd to need discussion. Fifthly, the governor of the province does not and did not reside at Kharfa, his seat always having been in the Laila oasis, formerly in Mubarraz and now in Laila itself. Sixthly, Palgrave could not possibly have visited Kharfa without seeing the other oases scattered far and wide over the plain, yet he ignores them; and finally, nobody resident in the Aflaj district could have told him that Wadi Dawasir lay a “moderate day’s journey south of Kharfa” (*vide* Vol. 2, p. 81), nor yet that Sulaiyyil lay three day’s journey south of Bisha beyond Wadi Dawasir.

Further criticisms might be levelled at his account without end, but the above will suffice to shew the crushing nature of the negative evidence against the admission of his claim; the positive evidence that he obtained his information about the district from the lips of a casual visitor from the south, presumably his friend of the unfortunate name, “Bedaa of Nejran”, is less voluminous but no less crushingly convincing. Leaving aside the hopelessly muddled account of the geography of the country south of Aflaj as unworthy of detailed criticism, we may suppose that Bedaa came up from the direction of Sulaiyyil *viâ* Aflaj to Riyadh. Travelling more by night than by day it would be quite possible for him to have passed by Badia without seeing it. He would then quite naturally group the three contiguous oases of which Kharfa is one under the ‘collective’

* An express messenger from Ibn Saud reached me at Wadi Dawasir (300 miles from Riyadh) in seven days, and this was considered a wonderful performance.

name of Kharfa where he doubtless stopped to refresh himself. The direct road thence to Riyadh would leave Laila and the other oases well away to the right—hence his omission, natural enough in an Arab, to mention them. Striking across the Rajd plateau by the route above described he would naturally enough draw rein in the Insalah downs, the name of which either he or Palgrave garbled into the fancy form given by the latter, who is doubtless solely responsible for the “village”, and thence, following the direct route along the edge of Tuwaiq, thus avoiding Kharj, he would have rested awhile in the Safra, a term commonly used to signify any bare stony tract of upland, and travelling by night he would have passed through or close to Hair without noticing it and arrived at Riyadh on the morning of the third day from Kharfa after a march of three full nights and part of the intervening days—a very different proposition to Palgrave’s performance.

So much for Palgrave. The province of Aflaj comprises two distinct districts, one wholly situated on the Tuwaiq plateau and consisting of a number of scattered oases in the beds of various ravines, the description of which I will reserve till I come to the account of my return journey, when I visited them, and the other, the more important section, lying wholly in the plain beyond the eastern extremity of the Tuwaiq slop. This section of the Aflaj province comprises a vast, roughly circular plain about thirty-five to forty miles in diameter from west to east and rather less than that from north to south. It is bounded on the north by the Rajd plateau and on the west by the Tuwaiq range, while the other two sides are contoured by the semi-circular rim of the Biyadh tract, which at the south-west corner of the district very nearly touches the edge of the Tuwaiq slope and on the north-east is overlapped as already noted by a projecting arm of the Rajd plateau.

Within these limits the plain is more or less flat except towards the south-east, where a rough limestone tract, called Ghadhara, of no great elevation, interposes between the settled area and the Biyadh, and inclines gently from west to east, being traversed in that direction by shallow sandy torrent beds issuing from the hill section of the province and bringing down annual floods therefrom to irrigate the oases. The settled and cultivated portion of the district comprises an oblong strip lying north-east by south-west in the middle of the plain, measuring

about five miles across and twenty-five miles in length from Umm Shinadhir on the north to the southern extremity of the Badia oasis, and containing some thirteen distinct oases to say nothing of a number of isolated patches of corn land.

The most remarkable feature of the district—a feature from which it derives both its name* and great part of its prosperity, greatly as the latter has obviously declined since ancient times—is a semi-circular group of eight spring-fed reservoirs, similar to those of Kharj, lying close together half-way down the eastern line of the settled area under the low rim of the Ghadhara tract. The largest of these called Umm al Jabal is a regular lake about half a mile long and a quarter of a mile broad lying at the southern extremity of the semi-circle and bordered by low reedy banks on three sides and the limestone cliff of the Ghadhara about twenty feet high on the east. Next to it northward lie two small pools called Umm al Habbab, one about ten yards by three and the other about sixty by forty yards in extent. Next northwards lies Umm al Adhman a square pool between low banks about 100 yards each way. Umm al Dhiyaba beyond it contains no water and has become filled up with debris forming a broad circular depression. Next comes Umm al Jurf a small reservoir about fifty by thirty yards in area between steep banks of no great height of which one is formed by the Ghadhara cliff; and finally the series is completed by two large basins called Bahra, respectively about 500 by sixty yards and 300 by fifty yards in area.

All these reservoirs, like those of Kharj, are, with the exception of Umm al Dhiyaba, of immense depth and contain the same clear, dark water. The slope of the land is from south to north with Umm al Jibal at the highest point, while to west and north the plain is scored by the marks of a vast irrigation system of subterranean canals of the Kariz type extending towards the Kharfa group of oases on the west and Saih on the north. The greater part of this chain of canals is in a state of ruin and decay, especially the western section which has long fallen into disuse owing to the failure of the flow of water from the three northern reservoirs. The remaining reservoirs still give a steady but exiguous flow issuing underground into Karizes, which flow northward under a broad expanse of high Nafudh, and thereafter, emerging into the open plain, run in narrow

* This obvious fact is not realised, so far as I could ascertain, by the present population of the district.

rivulets named after those of Hasa, until they merge in a single channel named Samhan which feeds the prosperous oases of Saih.

Southward of Umm al Jabal the land seems to slope southwards along the edge of the limestone tract and at a distance of three miles from the reservoir another perennial stream, called Ain Suwaidan, whose source often sought for has never been discovered, crops up out of the earth and irrigates the miserable little oasis of Ghauta. Still further south at about seven miles from Ghauta runs yet another aqueduct called Saqi Banna which cropping up in the middle of the limestone tract, here extending nearly to the borders of Badia, runs a short course into the unimportant palm-groves of Banna.

Here and there on the limestone tract in the immediate neighbourhood of these sources lie scattered groups of the same circular, cairn-like ruins as I have described in connection with Kharj. The largest group, extending over an area of not less than one square mile lies close to the Suwaidan rivulet, and others lie between the reservoirs and Saih, all bearing silent witness to the great prosperity of the past now gone perhaps for ever; for there can be little doubt that the dwellers in these dead cities were not Arabs.

Ruins of a more recent date and of Arab type—mud walls and mud towers—are also found here and there about the district. The greater part of them can be dated by old men still living, being the result of stress and strife from the time of Feisal onwards. The ruins of old Badia, of which more hereafter, take one back rather further, but the most interesting group is that which lies east of Saih and consists of what appear to be the remains of a walled city of immense size, of which little is left but parts of the outer wall and its protecting towers. To these ruins, called Qusairat Ad, the Arabs, supremely unobservant of anything beyond the normal scope of their daily life and certainly unaware of the historical significance, almost indeed of the existence of the cairn-like ruins above mentioned, have transferred a historical tradition—doubtless inherited from the past—which should almost certainly be applied to the more ancient ruin groups, if to any part of the Aflaj province. Here it was, they say, that the great King, Ad ibn Shaddad (or Shaddad ibn Ad?), ruled in ancient days over a fertile country extending twenty day's journey southward to his capital called Wubar, where he made himself gardens like Paradise and took to himself 2,000

concubines and a bodyguard of 2,000 warriors with 2,000 fiery steeds and the like appanages of a great kingdom. But in all his glory he forgot his God, who rose up and smote him in his wrath with the west wind, the terrible Dubar, which raged unceasingly for eight days and buried Ad and his earthly paradise and his fair kingdom with mountains of sand. The Aflaj felt the effect of the terrible catastrophe and lay in ruins until restored to its present state in recent times; but to this day the ruins of its old cities and canals and the great sand desert far away beyond the Biyadh bear testimony to God's handiwork of old.

Modern Aflaj owes comparatively little to the sources of its ancient vitality. It is true that Saih, irrigated by what remains of the old canals, is the finest oasis in the district, but it is readily admitted by its people that the best parts of it owe their density to industrious well cultivation and to the floods, which sweep down from the hills twice or thrice each year. Ghauta and Banna in spite of their perennial streams are but small and miserable settlements and all the rest of the Aflaj oases live by well irrigation eked out by the floods, which descend from the hills at intervals during winter and spring in three shallow, sandy channels, namely, Umm al Jurf (known as Ghail or Ashaira in the hills) irrigating the northern part of the settled tract and passing between Umm Shinadhir and Wusaila, Batin al Hamar (Kiriz in the hills) irrigating Kharfa and Saih, and finally an unimportant stream from the lower slopes of Tuwaiq called Harm, with a branch called Khirr, which passes through the Badia oasis to Banna.

The northern section of the settled area of the Aflaj district consists largely of corn land disposed in scattered patches centreing on the twin villages of Umm Shinadhir* and Wusaila. These two villages inhabited exclusively by Dawasir of the Al Hasan section are generally considered as one under the name of Wusaila; indeed we were actually camped in Umm Shinadhir when, in answer to my enquiries, a resident of the village declared that there was no place of this name in the neighbourhood and it was not till later that I was told that the name while loosely applied to the whole group of *qasrs* comprising the village strictly belongs to a particular well. Nevertheless, the two

* One hundred and fifty-eight miles from Riyadh by my route, perhaps 145 miles if my circuitous tour in Kharj be contracted.

villages are quite distinct both in situation and character, Umm Shinadhir comprising a strip of corn land about one and a half miles long and a few hundred yards broad with some fourteen *qasrs*, of which some are in ruins, scattered at short intervals along it, while Wusaila is a wretched little hamlet of some thirty houses with a few isolated *qasrs* standing amid cornfields and five small palm-groves. The water in both villages is slightly brackish except in one well in Wusaila, the average depth to water being about eight fathoms. The total population is not more than 250 souls of which Wusaila contains about 150. North-east of these villages at a distance of about three miles lies a fairly extensive corn patch with a few *qasrs* called Jufra; north-west at the same distance lie the ruins of Shajariya a similar settlement long abandoned; and a number of isolated *qasrs*, standing in small corn patches, lie in the plain south-west of Wusaila. These are Nahaqa, Sabah al Khair, and Qasr Rawwas, all belonging to inhabitants of Laila.

The central section of the settled area is the most fertile and thickly populated, comprising the oases of Laila, Saih, Ammar, Kharfa, Raudha, and Saghu—the last three forming a continuous group—a large abandoned corn tract called Makh Khadha and the network of canals already mentioned in connection with the reservoirs.

Laila, the capital of the province and its only town, is situated at a distance of three and a half miles from Wusaila on the western fringe of a fairly large but somewhat straggling palm-belt roughly one mile square. Backed by palm-groves on the east side with broken patches of palms to north and south the town of Laila, with its high walls and two large forts, one occupied by the official governor of the province and the other by the leading family of the Ajjalin subsection of Al Hasan, makes quite an imposing picture. The governor's fort projects slightly from the western wall, which crosses a small torrent bed on a primitive arch, through which flood water passes into the town to a rough depression outside the north wall. There are three gates, one in the west wall flanked by the fort, one in the south wall and one facing north, while on the east side the palms come right up to the wall. The entrance to the fort is on the east side faced by an open, oblong space, three sides of which are lined with about forty small shops, while the central space seemed at most times to be crowded with women hucksters, whose

goods consisted largely of vegetables and articles of apparel. The main street runs from the north to the south gate across the eastern end of the Suq and is connected with other parts of the town by cross lanes. The town is irregular in pattern and has two small suburbs named Hazaimi and Marair and another without name at no great distance from the northern wall—these being inhabited exclusively by negro freed men, who seem to form a considerable proportion of the population of the Aflaj settlements and particularly of Saih. The bulk of the 4,000 souls, which at a rough estimate constitute the population of Laila, are of the Ajjalin subsection of the Al Hasan.

Facing the town across an open space beyond its northern suburbs and occupying an angle in the north-west corner of the oasis stands the rival settlement of Mobarraz, once a town, indeed once the capital of the province and the seat of the Wahhabi governor but now no more than a straggling village buried in the remains of its dismantled glory; for in the turbulent days of the past constant strife raged between the Ajjalin of Laila and the Al Buras (another subsection of Al Hasan) of its rival and the open space between them was the scene of many a pitched battle. Abdulla and fate sided with the Ajjalin and, in spite of assistance from Saih, Mobarraz succumbed, its fortifications and large part of its dwellings were razed to the ground and it was degraded from the proud position of capital. Many of the Al Buras were slain, many were banished and the present population of the village is probably not more than 1,000 including representatives of other subsections of Al Hasan, particularly Al Hajji, a considerable number of negroes and a small subsection of Subai called Al Rashud.

In the middle of the oasis there is a small hamlet called Rumahi containing a population of about fifty souls; a number of *qasrs* mostly in ruins and buried deep in sand lie along the north-east side of the palm-belt, and finally in the open to the south of Laila at the south-western corner of the oasis is a neat little irregular-shaped walled village called Jufaidariya containing a population of about 500.

Of the palm-groves and the oasis in general, whose total population will be seen above to be about 6,000, including detached *qasrs*, little need be said beyond that they are of very unequal quantity and density. Wells are plentiful and water abundant at about six to eight fathoms below ground-level;

the dates of the oasis, comprising mostly the varieties known as Siri, Safri, Makwizi, and Nabt al Saif, are of excellent quality ; cotton is grown in a desultory fashion, never in fields but as stopgaps and border plants ; saffron, lucerne, and egg-plant are largely cultivated ; wheat is grown to a limited extent and the ordinary fruit trees of Nejd are found in fair profusion—pomegranates, vines, peaches, and apricots, the fruit of the first-named being gathered unripe and used exclusively for the extraction of a dye for women's garments.

No account of Laila would be complete without at least passing mention of the tragedy enacted in its market place in 1910 on the occasion of the Araif rebellion. The rebel standard was first raised at Hariq, whose leading men declared for the descendants of Saud and on Ibn Saud's approach accompanied them in their flight southward. Hariq was partially destroyed in revenge for its disloyalty ; Hauta saved itself from like treatment by refusing the fugitives asylum and the hapless rebels fled to the Aflaj where they received some show of support. Ibn Saud's swift pursuit and unexpected arrival before Laila however prevented the rebel situation developing and, the pretenders themselves having sought safety in flight to Mecca, their Hariq supporters threw themselves on the mercy of Ibn Saud and surrendered at discretion, whereupon nineteen of them, including seven of the chief citizens of Hariq, were led out in pairs into the centre of the market place and solemnly decapitated in Ibn Saud's presence.

About three miles to the south-east of Laila lies the splendid oasis of Saih, lying roughly north-west by south-east and measuring nearly two miles in length and one mile across its broadest part. Watered, as I have already noted, by perennial streams, floods from the hills and wells, Saih is by far the most flourishing of the Aflaj oases ; its palm-groves are extremely dense and as one would expect, there is a good deal of subsidiary cultivation, fruit trees, vegetables and the like. The oasis consists of two distinct but contiguous sections, each of which contains one village of moderate size and a number of petty hamlets. The western section is called Saih (Al Dunya) and belongs mostly to a group of thirty Ashraf families of Yemeni origin under the headship of Mohammed ibn Fahhad, a delightful, robust old Sherif of some fourscore years, who represents the twelfth generation settled in the village since its original capture from

the Dawasir. The Ashraf element numbers perhaps some 200 souls in all who arrange for the cultivation of their groves by a large and sturdy negro population numbering some 3,000. Of recent years there has apparently been a good deal of encroachment by purchase on the Ashraf possessions by enterprising merchants and others of Laila, while a small part of this section belongs to members of the Qainan subsection of Al Hasan. Saih, an untidy unwallled village of about 300 mud huts with two mosques, stands at the southern extremity of the oasis, while two hamlets called Lazidi and Fuwaidhiliya at the other extremity of the same section are wholly occupied by negro tenants.

The eastern section of the oasis is called Qutain (or sometimes Saih al Aqsa) from its chief village which lies in two semi-circular unwallled sections separated by a torrent channel on the south-east side of the oasis. Other settlements in this section are the small twin hamlets of Atmara and Rifa standing out from the eastern palm fringe, a short way north of Qutain, a small group of *qasrs* called Qasr Anaizan further north, a detached grove and large *qasr* called Tuwairif separated from the northern extremity of the oasis by the storm channel of the Batin al Hamar and finally, a small group of *qasrs* called Qasr al Khalaf half-way between Qutain and Saih. All the Qutain sections belong to Al Hasan Dawasir of the Ammar, Tamim, and Qainan subsections with a small number of Akhwan of the Hamid subsection occupying Qasr al Khalaf. Practically all the Al Hasan owners are nomad absentee landlords and the resident population consists largely of negroes, the total population of the section being about 1,000. The resident population of the whole oasis thus amounts to some 4,500 souls of whom a very large proportion are negroes.

Saih was always in the past a bitter rival and enemy of the Ajjalin of Laila, but of recent years there has been little fighting—in fact since 1910 when Qutain was deprived of its fortifications on account of its exhibition of Araif tendencies and Mohammed ibn Fahhad himself very narrowly escaped sharing the fate of the Hariq contingent.

West of Saih and south of Laila at a distance of about two miles from either lies the small village and oasis of Ammar, belonging as its name indicates exclusively to the Ammar subsection of Al Hasan. The village, which with one or two outlying *qasrs* may contain a population of some 500 souls, forms a more

or less regular oblong 250 yards long and 100 yards broad ; it is surrounded by a wall of uneven height dotted at frequent intervals with high strongly-built towers altogether out of proportion to the size of the village. The only gate worthy of the name is in the south wall ; the main street of the village runs thence northward for about 150 yards when it is brought to a stop by a high tranverse building flanked by several towers of large proportions, the residence of the local Amir. A doorway through this building gives access to a continuation of the main street, which finally ends at an open gap in the northern wall—a gateway strangely out of keeping with the heavy fortifications of the rest of the village. The eastern extremity of the oasis appears to have been a good deal encroached upon by a strip of heavy Nafudh extending in the direction of Saih.

At a distance of about one and a half miles south-west of Ammar lies the northern extremity of the last oasis group of the central section, extending about three miles from north to south with an average breadth of half a mile. The group consists of three distinct oases, namely, Kharfa on the north, Raudha in the middle, and Sughu on the south.

The Kharfa oasis consists of two thin straggling palm-belts running east and west with a narrow strip of corn and lucerne fields between them. The northern palm-belt is traversed by the storm channel of the Batin al Hamar, and besides a number of self-contained *qasrs* contains the parent village, the greater part of which is in ruins betokening a greater degree of prosperity in the past. The inhabited part of the village is a very small fairly compact block of mean mud huts not more than seventy yards long and fifty broad. A small outlying hamlet stands at the eastern extremity of the southern palm-belt in which *ithil* is largely interspersed among the straggling palms. The population of the whole oasis cannot be more than 1,000 souls if as much and is wholly of the independent Ghiyathat section of Dawasir, the explanation of whose intrusion into Al Hasan territory I was unable to ascertain.

Raudha is separated from the southern fringe of Kharfa by a narrow open space studded with copious ruins and consists of a miserable straggling palm-belt with a good deal of miscellaneous cultivation, in which stands the village of Raudha itself a compact little square with high walls and tall towers tapering curiously almost to a point at the upper extremities ;

close by the village stand two small hamlets—Raqaishiya to the west and a nameless settlement of people from Saih to the south. With the exception of this element from Saih the population of Raudha, numbering some 500 in all, belongs wholly to the Mubarak subsection of the Al Hasan.

Sughu, the last oasis of the group, lies immediately south of Raudha and consists of only a few groves, a small area of cornfields and a tiny hamlet of some seventy or eighty houses containing, with a few isolated *qasrs* in the groves, about 300 inhabitants.

A march of eleven miles SSW. across a flat plain with occasional outcrops of sand brings one to Badia, a large oasis, which with the few scattered settlements lying along the edge of the Ghadhara tract to the west makes up the last or southern section of the settled tract of the Aflaj district.

Badia is reputed to have been in ancient times the chief city of Aflaj. That this southern section was in very ancient times the most important part of the district seems to be amply borne out by the extensive ruin fields along the fringe of the Ghadhara tract, of which I have already made mention. In more recent, say mediæval, times the Badia oasis is said to have been occupied by a tribe or family called Al Asfar, regarding whose origin I could obtain no information; the Asfar gave way to the Jumaila section of the Anaza when the latter spread over Nejd, on whose character and destinies they have left so strong a mark; for indeed from the members of the ruling family downwards throughout the length and breadth of Nejd all that is not dour and sour is probably traceable to Anaza sources or Anaza influence. The Jumaila in turn were driven out of the district by the Dawasir invasion which appears to have taken place within the last two centuries.

The vicissitudes of fortune which Badia has passed through have left a legacy of ruin and decay and one of the three distinct sections into which the oasis can be divided is called Haddam, the ruin field, the site, to judge by its extensive remains, of a once large and flourishing city.

The second section or Badia proper occupies about two-thirds of the remaining area of the oasis and comprises a number of hamlets and isolated *qasrs* scattered about its straggling shapeless palm-belt and cornfields. This section is inhabited by the Sukhabira subsection of Al Hasan, numbering perhaps

some 1,500 souls distributed among the three hamlets of Salma, Suq, and Butina and the various *qasrs*. Salma and Suq appear originally to have formed a single walled village which it incurred the wrath of and was destroyed by Abdulla. Suq is now a wretched straggling, misnamed collection of mean huts on either side of a single street, while Salma retains a portion of its old high wall and is a small compact block. Butina is a small unvalled hamlet west of Salma. A ruined hamlet called Mishrif stands out about a quarter of a mile from the northern fringe of the oasis and another called Umm al Zubbaiyara lies between it and Salma close to the ruins of the western wall of Haddam. The palm-groves are irrigated by numerous wells about seven or eight fathoms in depth and by the small torrent bed of Harm, which ends in the oasis.

A branch of the Harm called Al Khirr separates Badia proper from the third section of the oasis called Quraina which contains one small walled village of that name, a small group of ruins called Qasr al Ala and a few *qasrs*. The total population of this section, belonging to the Shakara subsection of Al Hasan, is not more than 500 souls and its palm-groves are of poor quality.

About two miles east of the oasis lies a small prominent knoll called Qurain round whose foot lies a fairly large patch of old cairn-like debris. Another mile south-east of Qurain lies the head of an aqueduct called Kharaizan in which runs a weak perennial stream eastward for one mile to the small palm-strip of Banna. Here are three small *qasrs* occupied by the negro tenants of the plantation and at a distance of half a mile beyond them are the ruins of half-a-dozen *qasrs* which with the corn-land around them have long been abandoned owing to the failure of the aqueduct.

North of Banna at a distance of four miles lies a narrow strip of palms with a small hamlet of about 200 inhabitants called Marwan. This plantation lies on loamy soil highly impregnated with salt in the bed of a torrent called Thuwair which ends abruptly at the eastern end of the palm strip in the rough limestone of Ghadhara.

The remaining plantations of Razaiqiya and Ghauta lie respectively north and north-east of Marwan, the former containing six and the other only two (both deserted) miserable

huts in a setting of moribund palm-groves watered in the case of Razaiqiya by wells and in that of Ghauta by the exiguous stream of Suwaidan.

With my visit to Badia and its surroundings a very pleasant sojourn in the plain district of the Aflaj province came to an end and on the morning of May 19 we loaded up and resumed our travels: but, before proceeding to a description of our journey and the country traversed, it will not be out of place to make a few remarks on the climate and the people of the province.

Water, as we have seen, is both abundant and of excellent quality especially at this season when the floods of winter and spring have renewed and, what is more important, cleansed the supply. The climate during my brief stay was unexpectedly pleasant, the temperature ranging from a minimum of 60° F. during the hour preceding sunrise to a maximum (recorded in a double fly forty pound tent thrown open to the prevailing wind) of 113° F. in the afternoon; these figures were the lowest and highest recorded during the period from May 13 (evening) to May 19 (morning), while the average would be a few degrees higher and lower respectively; at nights a blanket was indispensable as the temperature runs down very suddenly from about 8 p.m. The prevailing wind during these days was from the south varying occasionally to south-east or south-west and generally of moderate strength, while on two days the wind veered round quite suddenly to the north for a few hours from noon onwards. The late afternoons and nights were generally windless.

As for the people they are uniformly inert, bigoted and ignorant though not actively fanatical unless disturbed. The attitude of the better classes, if one can call them such, to my visit was one of sullen resignation and passive objection; the Amir himself, a native of Sulaimiya in Kharj, though polite and even cordial in deference to Ibn Saud's injunction, made little secret of his personal disgust at the intrusion of such as me among God's people; and finally the common folk and especially the women and children evinced a certain amount of awesome curiosity and collected in little groups at a safe distance to inspect the representative of a race reputed—doubtless owing to the teachings of the so-called learned men—"to eat men and ravish women." This fantastic idea apparently prevails quite seriously throughout Southern Nejd. Only on

one occasion however was there any active sign of hostility, namely at Laila where a couple of my party were driven away from a private well, where they certainly had no business to be, with shouts of *Kafir*, to which they responded by rushing back to camp for their firearms and reinforcements. Fortunately, I soon realized what was afoot and was able to check the mischief before it went any further. Personally, I enjoyed complete liberty to go about the town and the various oases and, though the people neither greeted me or my companions nor returned our greeting, they were generally polite when actually spoken to.

What remains of the Aflaj plain after Badia (roughly 2,150 feet above sea-level and 190 miles by my route from Riyadh) slopes gently southward to the important drainage channel of Shaib Hunnu, which being a continuation of the Haddar ravine (called Shaib Hasraj in the hills) collects the drainage of all the ravines of Tuwaiq north and south of Haddar, spread over an area of some thirty miles in all, and flows out into the plain, at first along the edge of the Biyadh and after a course of some miles into and through it presumably to the great desert. We reached and crossed the storm channel of the Hunnu, about which there was plentiful fresh-looking scrub, thorn bushes, etc., after a south-westerly march of some seven miles from Badia, and beyond it ascended the gentle slope of the Biyadh which at this point throws out a great triangular projection to within a few miles of the edge of Tuwaiq. Our course now lay SSW. over an immense upland tract of a monotonous grey-white lime gently inclined to north and west and traversed by a number of insignificant depressions draining the slope into the Hunnu behind us. The first of these depressions was Khufaisa running north-east; a mile or so beyond it we crossed the Umm al Muraib running across our path from south-east to north-west, and finally, some ten miles after crossing the Hunnu, we entered and followed the course of Shaib Sudair, a channel of some importance draining a considerable area of the Biyadh by several branches running generally from south-east to north-west into the Hunnu. Following the Sudair for four miles we camped for the night and on the following morning reached a low ridge (about 2,500 feet above sea-level) two miles on, which is both the source of the Sudair and the watershed between the Hunnu and the Maqran drainages.

From this point we entered a shallow saucer-like depression

about five miles in diameter and draining from all sides into a number of small bush patches, known collectively as Al Karmidiyat, in the centre, crossing which to its further lip we descended the gentle outer slope of the Biyadh along the course of Shaib Muraikha to its confluence with a large bushy depression called Shaib Hauzaiyya about five miles from the edge of the Karmidiyat saucer.

We were now out of the Biyadh tract whose outer cliff runs from this point south for two miles to the head of the Maqran depression and thence south-west, its sides enclosing, with the distant edge of the Tuwaiq, a vast triangular depression dotted with broken ridges between which a number of broad channels run down to a central basin or junction (Maqran) from which a single channel carries their superfluous water through the heart of the Biyadh towards the southern sands.

Of these channels the most important are the Shutba and Dhabahiyya which drain the Tuwaiq plateau from its western rim and emerging on the plain at its eastern extremity run down in broad bushy channels on either side of a large isolated ridge called Mughali until they meet in the Maqran. The Hauzaiyya already mentioned drains a small isolated ridge called Fard standing out from Tuwaiq into the Shutba, which also receives the drainage of the Biyadh slope from a small Shaib called Hawi. From the west and south-west the Dhabahiyya receives the drainage of two channels namely Shaib Atur, separated from it by a thin tongue of sand and apparently rising in a low group of ridges called Farda ibn Muwwash, and Shaib Sahab running down from the southern watershed of the Maqran system between the rim of the Biyadh and the eastern edge of Farda ibn Muwwash, which to all intents and purposes forms a second triangular projection of the Biyadh towards Tuwaiq.

The junction or Maqran itself is a large well-wooded basin, well stocked with gum-bearing Acacias (Talha) and other trees of considerable size, and chiefly remarkable for its three large ponds (Khafs), which though of recent formation, have for several years held a permanent supply of water, to which the Badawin flock in vast numbers from the waterless pastures around and which has resulted in a substantial shortening of the Aflaj-Sulaiyil road by cutting off the detour formerly made for water to the hamlet of Shotba at the edge of Tuwaiq. These ponds, ranging in size from eighty by thirty yards to twenty by fifteen

yards, are shallow depressions about two to three feet deep in the bed of the basin and at any rate at this season contain excellent water, though their accessibility to sheep, camels, and other animals probably results in fouling the supply later on. As already noted a single channel runs from the basin through the Biyadh, whose cliffs rise to about twenty feet on either side and are dotted at intervals with prominent knolls of black volcanic rock. The Maqran which is the most important drainage outlet between the Sahaba system and Wadi Dawasir forms the recognized boundary between the Al Hasan and Wuddain sections of the Dawasir, the range of the former extending northward to the Arma and Dahana and that of the former southwards to Sulaiyyil and the wadi.

Passing out of the Maqran depression across the bed of the Dhabahiyya we kept close along the rim of the Biyadh up the broad valley of Shaib Sahab for about six miles, camping for the night at the confluence with it of a small Shaib called Abu Talha from the Biyadh, and the following morning we marched up the same valley for thirteen miles to a ridge connecting the Biyadh with the Ibn Muwwash hills and forming the watershed between the Maqran and the Hamam drainages. The slope was now southward and our course lay SSW. down a narrow trough lying between the outer slopes of Tuwaiq and the edge of the Biyadh now barely three or four miles apart. Having marched thus for six miles we entered the Shaib Ghudaiyir coming down from Tuwaiq and for the rest of the day generally followed its erratic and much broken course, in which we camped for the night in view of the palms of Hamam, four miles distant.

Hamam itself, an outlying settlement of the Sulaiyyil district, we reached early on the following morning. It comprises a considerable number of ruined *qasrs* and wells denoting past prosperity and present decay, one good *qasr* recently constructed and occupied by an official appointed by Ibn Saud to keep the peace, half-a-dozen *qasrs* inhabited by as many families of the Rashid subsection of Wuddain, about fifty or sixty acres of wheatfields and sixteen palms and finally a prominent rock of no great height on the top of which are the remains of an old fort—the whole situated in the bed of the Hamam Shaib, which, reinforced by a Shaib called Marran about two miles upstream of the settlement, flows down from Tuwaiq into the

Biyadh through a gap called Bazumain. On the Hamam Shaib converge Shaib Ghudaiyir from the north and a number of petty shaibs draining the outer slope of Tuwaiq from the south.

Continuing our march down the trough but keeping close to the edge of Tuwaiq we crossed those petty streams one after another until at a distance of ten miles from Hamam we reached a low divide marked by a cairn called Rijm al Mansifa, the half-way mark between Hamam and Sulaiyyil. From this point a number of petty shaibs from Tuwaiq run down south-east into a bushy depression called Mahtifar sandwiched between the Biyadh on the east and a low broad ridge called Naajaniya which is an offshoot of and is separated from Tuwaiq by a narrow valley and as it were closes in the trough on the south.

We camped for the night in one of these Shaibs about four miles beyond the half-way mark and on the following morning a short march brought us to the southern extremity of Tuwaiq between which and the Naajaniya ridge we followed up Shaib Sadiya to a low projection of the Naajaniya ridge from the summit of which we looked down on Sulaiyyil and Wadi Dawasir.

The scene that so suddenly met our gaze was worthy of the occasion. At our feet about a mile away the little hamlets of Sulaiyyil nestled in the bosom of a green oasis. Beyond lay the broad valley of Wadi Dawasir cleaving through the mighty barrier of Tuwaiq by a narrow gap in the steep western escarpment, from which the southern plateau extends eastward along a well marked ridge of rapidly diminishing elevation behind the wadi, while the northern section falls back in a north-easterly direction rapidly breaking up into a low tumbled slope pierced by a deep northerly indentation, down which runs the valley of Shaib Majma, and thence rising again to the low ridge overlooking the Hamam trough. The Majma valley running south fills the space between the wadi and northern Tuwaiq and on the east is bounded by the Naajaniya ridge as far as its point of confluence with the wadi, whence the southern slope of Naajaniya and the ridge of southern Tuwaiq enclose a narrow channel for the passage of the wadi to its grave in the great sands beyond. Far away to the west close to the gap of Tuwaiq lay the dim green patches of the oases of Khuthaiqan and Kabkabiya while Tamra lay south of the former hidden by a projection of the southern ridge.

Such is the Sulaiyyil district in broad outline as we first saw it. The oasis itself, some hundred miles distant from Badia and 288 miles from Riyadh by our route, lies at an elevation of about 2,150 feet above sea-level on the left bank of the storm channel of Shaib Majma about two miles above the confluence of the latter with the channel of the wadi. Between it and the Naajaniya ridge is a bare stony strip of ground, while the soil between the Majma and wadi channels is alternately of loam and sand with salt-impregnated patches. The palm-belt is extremely dense but not of great extent being some one and a half miles long from north to south and of an average breadth of a quarter of a mile; in it and on its eastern edge are disposed the four small hamlets of Faraa, Muqabil, Sabha, and Dahla in that order from north to south, of which the largest is Sabha, the local emporium by virtue of the four small shops, which retail the coffee of Yemen and the piece goods of India to a small clientèle and act as forwarding agents of the former to the villages and towns of Nejd. In this connection I may note that traffic in the Yemen berry, called Barriya because imported by land, is extremely brisk, the people of Southern Nejd from Hauta and Kharj downwards rejecting the Indian article as unfit for human consumption. The product of Yemen prepared as the people of the south prepare it is a real stimulant—almost an intoxicant.

The hamlets of Sabha and Dahla, more often called by the names of the subsections of the Wuddain who inhabit them, namely Al Mohammed and Al Hanaish respectively, are unwalled, untidy groups of mud houses, situated about a quarter of a mile apart towards the southern end of the oasis, the latter standing on the lower slope of a projecting ridge of Naajaniya from the top of which its inhabitants were wont in the old days of internecine feuds to fire upon the open village of their nearest neighbours. The population of each of these hamlets may be some 500 souls.

Faraa at the northern extremity of the oasis and better known as Al Dhuwaiyan, another subsection of Wuddain, contains about 300 souls, while Muqabil (called Al Suwailim) has a population of about the same number and is situated in two small blocks within the eastern fringe of the palm-belt.

Besides these four hamlets there are a number of isolated *gasrs* and petty groups of buildings scattered about the oasis and bringing up the total population of Sulaiyyil to some 2,000 souls.

South-east of Sulaiyyil along the Majma channel lies a group of twenty-three wells known as Latwa, reputed in ancient times to have been the original site of Sulaiyyil but consisting now of only a few small isolated palm-groves and a fairly large area of corn-fields owned and tilled by the people of the main oasis (mainly Al Hanaish, who own all except three of the wells). This strip of cultivation lies for the most part on the left bank of the storm channel close under the Naajaniya ridge, at various points on which lie groups of masonry ruins of which the most considerable is one called Qasr Thari.

At the end of the Latwa tract the actual junction of the Majma and the wadi takes place in a wide circular patch of sand and loam besprinkled with tamarisks and Ghadha bushes. The combined channel now runs close under the Naajaniya ridge past piles of sand which block the rest of the valley to a point where the Naajaniya and Tuwaiq slopes run down to nothing and the Wadi Dawasir, henceforth recognizable only by its broad Ghadha covered sand strip, runs out slightly south of east over a great bare plain, called Farsha, over whose horizon it finally disappears apparently spreading out its tentacles of sand wider and wider as it goes until they are finally swallowed up by the sands of the great desert. Beyond this point I did not go but the view I obtained from a cairn set high on the last ridge of Naajaniya was sufficient to establish beyond question the ultimate direction and fate of the wadi, whose storm channel indeed at this point has, as will be seen later on, long ceased to be a functionary part of the great southern drainage system of ancient times in as much as the waters it carries in flood are borrowed from the Majma and petty rivulets from northern and southern Tuwaiq and survive but a little way beyond the point from which I turned back.

As for Southern Tuwaiq it falls back south-westwards from the Sulaiyyil basin, as far as one can see, tilted up from the low slope bordering the Farsha to the high rim of the western escarpment, whose steep outer cliff, receding in an endless echelon of gaunt headlands, faces the far distant sea range of Asir across the Dawasir desert. So far as I could ascertain, the plateau is again divided at about two or three days journey to the south by a wide drainage channel called Fau and finally loses its identity in the sands of the great desert in a locality known as Al Mundafin. Across the plateau the main trade route to Nejran

runs due south—a ten days' journey mostly over waterless country infested by marauding gangs from the Yam tribes, some of whom having adopted the Wahhabi creed profess and to a certain extent practice allegiance to Ibn Saud,* while the rest are of the Biyadiya and various semi-pagan† persuasions and apparently submit to no central authority. The settled inhabitants of Nejran and Habuna, which are distinct wadis running separately and parallel to each other at half a day's journey apart to the sands, apparently own a loose allegiance to the Turkish Government but are in practice independent, the Nejran colony containing four well-to-do and respected Jewish families, originally from Sanaa, who make their living by financial operations and the ornamental metal work for which Nejran enjoys a high reputation. Considerations of space, however, deter me from expatiating further on the country beyond Sulaiyyil and the wadi, regarding which I collected a good deal of information during my sojourn in these parts.

Returning to Sulaiyyil, we find crops and cultivation following the pattern of the Aflaj with the exception of the pomegranate which is unknown either here or in the wadi; cotton is grown not largely but rather more profusely than further north and in one solitary instance I found a small field devoted to it. The dates, largely of the Makwizi variety are excellent and the palms give heavy yields. Wheat and vegetables, grapes, peaches, and citrons complete the list.

For administrative purposes the district falls loosely under the jurisdiction of the official Amir of the wadi, but for all practical and municipal purposes the Amir of each petty hamlet is a law to himself and his people and the Amir of the wadi only interferes to prevent hostilities between rival subsections—and that he does with a heavy hand with the result that Sulaiyyil has enjoyed unbroken peace for a considerable number of years.

Of the people the Al Hanaish, thanks to the tolerant, broad-minded old man who is their Amir, were unexpectedly cordial, visiting our coffee tent and inviting us to their houses for coffee or other meals with great frequency. The Suwailim and Dhuwaiyan were reasonably friendly and polite, but the Al

* Ibn Saud actually collects Zakat from the Badawin elements of the Wahhabi section, and on my arrival at the wadi I found the chiefs of the Rashid and Fahhad section submitting a blood feud for adjudication by the local Amir.

† I was told on apparently good authority that mountain worship is commonly practised, at any rate by sections of the Badawin of Nejran who make offerings of meat, milk, butter, etc., to certain mountains supposed to possess divine powers.

Mohammed one and all withdrew into their shell on our arrival and made it quite clear by their attitude that, while they disapproved of our coming, they would neither assist us to be comfortable nor actively interfere with our arrangements. Such an attitude had at least something to commend it, but Ibrahim, who was in charge of my party and whose treatment of delicate situations exhibited neither tact nor commonsense, decided without consulting me to raise the issue of their right of passive objection to Ibn Saud's orders. To this end he quite gratuitously sent two men to the Amir of the Al Mohammed demanding the supply of some flour or grain; the demand was flatly refused and the messengers returning with the tidings to Ibrahim were sent back a second time to support their demand with threats; on this occasion they were seized, deprived of their rifles and swords and beaten for infidels. What happened next I do not know but I was sitting writing in my tent when suddenly I heard some shouting in the distance taken up by cries in our camp of "To arms! To arms!" Not knowing what had caused the trouble I joined what remained of our party in putting our camp into a state of defence and the next hour was spent in awaiting the outcome of a loud abusive altercation taking place a short way off between representatives of both parties armed to the teeth. In such situations the main danger seems to lie in the accidental firing of a shot: if the altercation, however hot and vitriolic, is not so interrupted, peace by compromise is assured; and so it happened in this case, Ibrahim and his companions eventually returning to camp and the enemy to their houses. The net result was the return of the seized rifles to us with expressions of regret conveyed by a neutral party, we received no visit from the offending Amir and no flour, and two of our party had suffered insult and injury. Such was Ibrahim's victory on which I expressed my opinion very freely over our evening meal.

The Majma valley is a drainage outlet of some importance in that on it concentrate from both sides all the ravines of the Tuwaiq plateau southward of a point close up to the Dhabahiyya. Known in its upper reaches as Shaib Maragha it forms a narrow, deep trough running up through the heart of the plateau which, as already noted, shews signs of rapid disintegration as it approaches the level-crossing of the wadi. To the east of the trough lies a broad, rough ridge overlooking the Haman valley

and draining both ways, while to the west lies the main body of the plateau scored by countless ravines into ridges which run down rapidly to the point where the Majma valley really begins. From here a broad storm channel runs down to Sulaiyyil passing on the way the ruins of a single *qasr* and well called Bahja, and west of the channel lie one or two similar groups of ruins on the courses of minor tributaries.

On May 26 after a halt of three days we resumed our march first across the Majma, then over the Rimdh-covered sand strip between it and the wadi and finally across the wadi to the edge of the gentle slope of Southern Tuwaiq which we followed along a well-marked road now on it and now just off it in the wadi bed. Thus we proceeded very slightly south of due west to the oasis of Khuthaiqan consisting of a somewhat extended line of small palm-groves of comparatively recent planting, two wretched little hamlets of twenty and ten houses respectively, several detached *qasrs* and two apparently purposeless and certainly superfluous watch towers—the whole situated on a low shelf of inferior saline soil sloping down from the edge of Southern Tuwaiq towards the valley which had now lost all signs of a storm channel and consisted of a rough patch of heavy *Sabkha* extending to the steep escarpment of Northern Tuwaiq about two miles distant. The population of this oasis is not more than 100 souls all belonging to the Dhuwaiyan subsection of Wuddain.

We were now quite close to the gap between Northern and Southern Tuwaiq marked by the prominent headlands of Khashm Ashghar on the north and Khashm al Amur on the south standing about a mile or rather more apart, while to our left lay the palms of Tamra up a small bay in the southern plateau, from which descended a couple of small Shaibs into the Sabkha valley.

Turning south we followed one of the Shaibs up its course for a mile to the oasis of Tamra itself where we camped for two days. Tamra consists of a small belt of palm and tamarisks extending about a half a mile along both banks of the Shaib with two unvalled hamlets of unequal size, the larger, Al Faris, containing perhaps some 400 inhabitants and the other, called Shara, about 100. The population is entirely of the Amur tribe which migrated here from the wadi a long time ago owing to the unsuccessful prosecution of a tribal feud; whether this tribe is of Dawasir origin or not is a moot point among local

ethnologists, who prefer to class it with the Haqban of the wadi and Hasa and the Mushawiya and Khiyalat of the latter province in a separate group designated Abat Dawasir—a name which suggests the admission of social affinity but not kinship with the main tribe.

The bay in which the oasis is situated is dominated on three sides by the cliffs of Southern Tuwaiq and I took advantage of the opportunity offered by our second day's halt to explore the top of the plateau, which in truth has few mysteries to divulge, though the summit of the Khashm al Amur headland commanding a wide but wholly uninspiring view over the monotonous expanse of sand which extends as far as one can see north, south and west and is broken only by the dim green patch of the tamarisks of Kimida. At the foot of the headland occupying an area about half or three-quarters of a mile in diameter lies the plantation of Kabkabiya, uninhabited and dependent entirely on rain, which is retained by the salt-impregnated soil sufficiently long after the close of each rainy season to support many small patches of none too flourishing palms belonging to the people of Tamra.

A march of two miles north-west on the morning of May 28 brought us to Kabkabiya and the gap whence we marched six miles slightly south of west along the edge of Southern Tuwaiq to the prominent doubled headland of Farda. From here, leaving the steep escarpment to recede in echelon of headlands to the south-west, we steered slightly north of west for nine miles to Kimida, a miserable palmless oasis in the middle of the sands with a small walled hamlet of 100 souls belonging to the Haqban tribe, who eke out their existence of cultivating wheat and a certain amount of cotton and vegetables under unfavourable conditions of soil and water. The place is reputed to contain 150 wells, but barely one tenth of that number are actually going concerns and the only product of the soil which really flourishes is the tamarisk which is not only extremely plentiful and of unusual size and girth for Arabia but produces a rich crop of berries—a phenomenon said to be confined to Kimida in particular and to the wadi on a limited scale and certainly not observed by me elsewhere—which are gathered and sold to dyemakers.

During the journey to this place I searched in vain for any trace of a wadi bed or depression. The whole country

west of the Tuwaiq barrier is a vast plain of sand rising in parts to substantial ridges and whether or not in the distant part floods have ever covered this tract, it is certain that they have not done so either recently or frequently enough to make an impression on its surface, and the unprecedented floods of July, 1917, which I shall presently have occasion to discuss more fully, failed by many miles to reach this point. Nevertheless, the fact that there is an ample (though bad) supply of subsoil water at no great depth from the surface in the area covered by the settlement makes it extremely probable if not certain that Kimida lay in the direct line of the flood channel, which at one time cleft the barrier of Tuwaiq asunder.

Our intention had been to push on after our midday siesta to Raka on the confines of the wadi and to reach Dam early on the following morning but our plans were upset by the occurrence of complications of a serious nature. On our arrival at Sulaiyyil we had sent on messengers with our credentials to the wadi to announce our arrival and another messenger had gone ahead of us from Tamra to arrange for the supply of fodder and other necessities at our destination. The latter we found awaiting us at Kimida with a messenger from the Amir.

Hearing of our intentions the people of Dam had held an indignation meeting and announced their firm resolve to oppose the entry of the infidel into their hitherto unsullied territory, if necessary by force, and suiting their actions to their words had sent out a band of armed roughs to hold the outskirts of the wadi against us. Ibrahim in all seriousness was for returning to the fastnesses of the Tuwaiq and sending for reinforcements from Riyadh, but more sensible counsels prevailed and we sent forward messengers with letters couched in suitably abusive terms to the chief men of Dam and to the Amir himself announcing our intention of arriving on the morrow whatever the consequences to ourselves and warning them of the consequences to them if ill befell us.

This done we camped for the night and on the following morning resumed our march wondering what the day had in store for us. Our course lay over the same sort of desolate sand desert as we had traversed on the previous day, but soon after leaving Kimida the sand ridges appeared to be running in parallel lines from west to east with shallow depressions between them. A march of five miles along one of these depressions

brought us to a barrier of sand lying about one mile to the south of a large patch of *Rak** bushes, known as Raka, situated in a similar depression shewing obvious signs of comparatively recent flooding.

Before us lay the wadi, that is to say the oasis of Wadi Dawasir,† a truly disappointing spectacle, a narrow belt of palms sunk low in a depression lying between a barrier of sand on the north and a bare stony slope on the south, with a hamlet or two on the latter; but in this case the first view was altogether deceptive and closer inspection revealed the fact that what we saw from the summit of this sand ridge was but the outskirts of a large and prosperous oasis.

Having breakfasted at leisure while taking in the scene we moved cautiously forward looking out for our returning messengers and ready to reply to any exhibition of hostility from the palm-belt. At length we espied a cavalcade issuing from the latter and making towards us at a rapid pace—our messengers returning with a strong escort of the Amir's retainers. Our letters had caused a second conference, the result of which had been a decision by the people of Dam to withdraw their pickets to defend their own particular territory against my intrusion leaving the people of other sections to defend or prostitute their honour as they chose. Something at any rate had been gained and further parley would doubtless produce further concessions but for the time being it was obviously inadvisable to adhere to our plan of going straight to our destination. We were now marching along the most easterly or Sharafa (rarely called Thamamiya) section of the oases, in whose three little hamlets small groups of spectators had gathered to see us pass. A mile further on we passed the ruins of Ruwaisa and Hanabija. Another mile and we alighted at the pressing

* The twigs of this bush, of what species I do not know, have a strong pleasing scent and are largely used as toothbrushes.

† This designation is understood readily enough but never used by the people of the south or indeed of any part of Nejd proper to signify either the valley or the oasis though the term occurs in at least one well-known song:—

“ Sahibi Wadi al Dawasir Muqarra

Bi-Dhila al Asmar Min Wara al Ramal Min Ghadi.”

“ My love her home is in the valley of Dawasir

In the Black Mountains (Tuwaiq) beyond the sands far away.”

The term *Alwadi* moreover is used exclusively to denote the oasis and not the channel or any part of it, the nature and possibilities of the latter being unsuspected until last year, while local geographers have to think hard before realising the real continuity of the wadi and Sulaiyyil sections of the channel, the latter section being called *Afja* in the Sulaiyyil basin and *Farsha* beyond it to the east. The term *Wadyan Dawasir* is unknown and would be extremely misleading.

invitation of its chief at the hamlet of Nuaima, one of a group of three small settlements, the other two being Quaiz and Nazwa.

Though it was comparatively early in the day we decided to remain where we were till the following morning and to prepare the way for our further progress by the despatch of more abusive and threatening letters, the result of which was eminently satisfactory, as the Council of Dam finally decided to adopt an attitude of mute protest and passive objection in place of active resistance to our visit. A small minority including the local ecclesiastical authority signified their dissent from this resolution by temporary migration into the desert, but so far as the rest were concerned we had little to fear barring accidents.

Accordingly on the following morning (May 30) we set out along the edge of the oasis on the last stage of our journey past the village of Matala on our left and the small half-ruined hamlet of Muqabil on our right with the town of Dam straight ahead rapidly drawing nearer. "Remember God" muttered the pious of our party as we came within effective range of the town; a momentary pause ensued (among us) as we stumbled unawares on to the local cemetery, and finally five minutes of nerve tension as we passed along the town wall before groups of silent spectators on the housetops before we reached and turned with a distinct feeling of relief into the gate of the Amir's fort in an open space between the towns of Dam and Mishrif. Here we remained until the afternoon of June 5 wandering at will over the whole oasis—of course, armed and in safe numbers—and no untoward event occurred to spoil the pleasure of our sojourn.

The distance from Riyadh to Dam by the route we had followed was 328 miles and the ordinary traveller's route would be almost exactly 300 miles. The western extremity of the oasis known as Faraa is another three miles on and the furthest points reached by me in the course of my tours were a patch of bushes in the bed of the wadi three miles upstream of Farra and the knolls of Muqattar and Mutaian respectively, two and a half miles south-west and six miles due west of Dam. From these last two a wide view was obtained over the desert south-west, west, and north-west. South-west and west this desert is a bare unattractive expanse of the Dibdiba type, that is to say generally of a stony character, broken by a considerable number

of low rough ridges and hills; visibility was poor on account of a perpetual dust haze and I never obtained a view of the Asir mountains. To the north and north-west extends a regular Nafudh, beyond which sections of a mountain range called Hadhb Dawasir, noted by me from the neighbourhood of the Shifa plain and Arq al Subai Nafudh on my journey to Taif, could be seen at intervals. The most interesting feature of the scene was, however, an apparently isolated mountain mass of considerable dimensions called Raiyyaniya, which was pointed out to me as the extreme upstream limit of Wadi Dawasir.

In the neighbourhood of Raiyyaniya, perhaps forty miles north-west of the wadi oasis, lies, according to information collected from all sources and sifted so far as possible, a vast depression called Hajla bounded on the east by a broad band of Nafudh, which, it seems to me, is not unlikely to be a continuation of the Arq al Subai itself, being, as it is said to be, to the southern drainage channels what the Arq is to the Wadi Subai—namely, an absorbent barrier seldom pierced.

The wadis of Tathlith, Bisha, and Ranya appear to run down into the plain at some distance behind Raiyyaniya and traversing the intervening space along erratic courses now converging on and now diverging from each other finally reach the hill. From this point the first two named run round the southern end and the last round the northern end of the barrier to empty themselves one and all into the Hajla depression, which as a matter of fact seldom actually receives any water at all owing to the depredations of cultivation and sand tracts in the upper reaches of the three streams. I think it may be accepted as substantially correct that the three great wadis above mentioned flowing respectively from south-west, west-south-west, and west-north-west and draining the mountain barrier of Asir come to a joint and final end in the Hajla of Raiyyaniya.

The Nafudh strip east of the Hajla may be anything from ten to twenty miles thick, an impenetrable barrier to the further progress of floods—so at least it was thought until June, 1917, when a terrific flood, causing widespread havoc and confusion, came down the Tathlith and burst through the sands into its old channel, into Wadi Dawasir which for centuries had known no water. The Amir of the wadi was sipping coffee in his parlour when the news of the coming flood was brought to him. "Bring me a cup" said he mocking "and I will drink it up". But

that same evening the first trickle of water reached Faraa followed by the distant roar of the flood and for seven days a flowing stream ran through the oasis destroying the wells and the only hamlet (Hanabija) actually lying in its path and finally reaching the bush patch of Raka before the flood abated ; and with the stream floated down the bodies of men and women and cattle caught unawares in the upper reaches. Thus, for the first time in living memory, for the first time, it is said, for three centuries, the Wadi Dawasir resumed its ancient rôle and became a living stream. Even so it failed by many miles to re-unite the broken unity of its channel or to reach the barrier of Tuwaiq to say nothing of the great desert. There was no loss of human life or livestock in the oasis itself, but the Qahtan of the upper reaches are said to have lost 150 human lives, 450 camels, and vast numbers of sheep. In the wadi where great lakes survived the subsidence of the flood for several months the effect, apart from the destruction already noted, has on the whole been beneficial, the bed of the storm channel formerly bare, being now covered with a carpet of green, while the level and quality of well-water shows a marked improvement. One remarkable feature resulting from the flood is a considerable outcrop of the hitherto unknown castor oil plant, whose seeds were doubtless brought down by the flood, within the limits of the oasis.

Enough has now been said about the channel of Wadi Dawasir to establish, I think beyond question, firstly, that Wadi Dawasir arises from the confluence of the Tathlith, Bisha, and Ranya wadis at the Hajla of Raiyyaniya ; secondly, that from this point its course runs nearly due south-east to the western extremity of the wadi oasis and thenceforth very slightly south of east to the point where it loses itself in the first sands of the great desert ; and thirdly, that its existence as a functioning drainage channel over the greater part of its course must date back to prehistoric times when the climatic conditions of the Arabian peninsula must have been vastly different from what they are now.

The oasis of the wadi extends for about nine miles WNW. to ESE., between its extremities of Faraa and Sharafa on the west and east respectively, along the course of the channel which at this point is bounded on the north side by a high rolling nafudh, descending to the bed of the channel by an easy slope and on the south side by a bare stony incline, with a light covering of

sand in parts, sloping gently up to a low ridge of similar character. The palm-belt, varying much in density and quality, lies in blocks separated from each other by open spaces from one eighth to a quarter of a mile long almost exclusively along the left bank, *i.e.* up the sand slope and contains a number of isolated *qasrs* or country houses, while the habitations with very few exceptions lie on the bare slope of the right bank, each town or village opposite the block of palms owned by its inhabitants. Between the habitations and the palms runs the wadi, seldom more than half a mile broad, in whose bed a good deal of wheat cultivation by well-irrigation normally takes place, though the flood of last year has resulted in a serious setback in this direction. The oasis is completed by a small uninhabited tamarisk patch lying half a mile east of Sharafa and the bush patch of Raka about two miles further east.

The extreme western section of the oasis is, as already noted, known as Faraa, though there is no village of that name, and consists of a straggling collection of small palm-groves with a considerable sprinkling of tamarisk and a number of small hamlets spread over rather more than one mile. The most westerly hamlet is Siraji, consisting of 100 souls of the Al Humaidhan division of the Al Uwaimir subsection of Wuddain. Close by it on the east are the hamlets of Al Nahish (200 inhabitants) and Al Jilal (fifty souls) inhabited by divisions of Al Uwaimir bearing those names. All these settlements and a solitary *qasr* called Maaimira lie among the palms on the left bank of the wadi. Still belonging to Faraa but situated on the opposite bank of the channel lies a group of four hamlets, two wholly and the other two largely in ruins, namely, Al Hamid and Huwaiza (ruined and untenanted) and Al Maanni (300 inhabitants of a division of the same name of Al Uwaimir) and Hamra (containing 200 inhabitants of the Al Uwaimir subsection). To the south of this group on the ridge lies a small ruined fort called Huwail. So much for the Faraa section whose total population is about 850 inhabitants: depending largely on corn rather than date cultivation it has been reduced to serious straits by the great flood.

Barely a quarter of a mile east of Hamra lies the large partially walled village of Sabha more often called Al Wullamin, containing some 1,000 inhabitants wholly of the independent Wullamin section of the Dawasir, who strongly supported the

attitude adopted by Dam regarding my visit. Opposite the village on the left bank of the wadi lies a splendid block of palms known as Usail and belonging to the Wullamin.

The next is the most prosperous and most important section of the wadi consisting, on the left bank, of two very fine blocks of palms separated by a narrow interval and together extending about one and a half miles down the valley and to an average depth of half a mile into the sand slope, and, on the right bank, of the only two settlements of the oasis which can be called towns, Dam and Mishrif, the former east of the latter and separated from it by a narrow open space, in which stands, on rising ground completely commanding both towns, the Barzan or fort-residence of the official Amir of the province.

Dam is the acknowledged capital of the wadi and in comparison with its surroundings is quite an imposing settlement. Lying like a hump on the gentle slope of the right bank it is about half a mile long from north to south and half that distance in breadth, though not by any means a regular oblong. The ruins of what used to be a surrounding wall are still seen at intervals, but the greater part of the town is open, there are no gates and the outer fringe of houses especially on the west and north sides are in ruins. The result is that the town looks rather larger than it is. So far as I was able to form an estimate, the total population cannot be more than 3,000 souls, all of whom are of the Rijban (independent) section of the Dawasir and enjoy a high reputation for churlishness. A number of *qasr*-like buildings stand out above the general monotony of low mud buildings both in the centre of the town and on its outer circuit, the chief of the latter, namely Qasr al Husaiyin at the north-east corner of the town being in ruins. In fact, since Ibn Saud took the affairs of the wadi among other places in hand some years ago, he has consistently worked for the demolition of all sources of private pride or strength or turbulence, and Dam to its great moral though not architectural improvement has experienced the full measure of his policy. The town takes second place to Mishrif as a commercial centre, the latter having a regular *Suq* of some thirty shops arranged on the common pattern of Nejdi markets round three sides of an exiguous open space, while the twenty or more shops of the capital are said (though I did not myself verify this) to be distributed at random among the various streets.

Mishrif, more commonly called Al Khammasin, lies on a very slightly higher level than Dam on the same slope and retains its old wall more or less intact, though battered in parts. It has two proper gates, one at the north-west corner giving admission to the *Suq* and the other on the east side, connected by a narrow rambling street lined by low mud houses of the usual type, but of a reddish-brown colour: this colour is found alternating with the ordinary mud colour pretty well everywhere in the wadi, but Mishrif is the best example of its almost exclusive use. A large section of the north-eastern corner of the town within the walls is in ruins, but the rest seems to have survived the vicissitudes of its old struggles with Dam remarkably well. The population belongs exclusively to the Khammasin subsection of the Wuddain and may number some 2,000 souls.

Between the rival towns stands the Barzan (about 2,500 feet above sea-level and perhaps twenty feet above the level of the wadi bed), one and the most recent of four forts which have at one time or another been erected by the Saud dynasty to keep the turbulent population of the wadi in order. Of these the *qasr* called Al Tauq standing about 200 yards from the north-east corner of Dam on a slightly lower level than the town was built by Feisal and to judge by the thickness of its mud walls and the deep moat around it it must at one time have been of immense strength. Now, however, it is in ruins, from what cause I do not know. The other two ruined forts lie to the south and south-east of Dam but are of no interest. Barzan was only completed last year, a fine square high-walled structure perhaps eighty yards each way with high towers at each corner commanding a splendid view into the interior of both Dam and Mishrif and, within, a large open space about which are disposed the Amir's apartments, a small mosque, kitchens, stables, etc., and a large coffee parlour or reception room. The Amir, Abdulla ibn Muammar, a cousin of the Amir of the Qasim, is a staunch and consistent Wahhabi, but not a sufficiently strong man for such a difficult charge: his bigotry moreover is the worst possible example to a populace already endowed with an amply sufficient allowance of that virtue; a man of pleasing cultured appearance, he made no secret of his aversion to being my host, nevertheless, as a host he left nothing to be desired and, in general, he left on me an extremely favourable impression—considerably

heightened by his politely-worded refusal of the customary gift, which I sent for his acceptance on the last morning of my sojourn under his roof.

East of Dam and at a distance of about one mile lies the small unwall'd hamlet of Muqabil owned by absentee Badawin of the Dhaluq subsection of Rijban and inhabited by a population of about fifty negro tenants—an element which figures largely in all the settlements of the wadi. The hamlet is situated near the edge of the palm-belt which from this point spreads over both banks of the channel for about a mile, and is owned by a large and almost entirely nomadic independent section of the Dawasir called Al Mukharim. This section appears at one time to have been more settled than it is now, if one may judge by the extensive ruins, mostly of isolated *qasrs*, lying along the edge of the palm-belt; the only village of this section is Matala lying about half a mile south-east of Muqabil, unwall'd, more than half in ruins and containing a population of not more than 200 souls, of whom a large proportion are negroes.

A gap of half a mile separates the Mukharim palm-belt from the best palm block in the oasis, known as the Lughaf, and belonging with the villages in it or on its borders to the Misaara, one of the three main sections of the Dawasir tribe. The palm-belt is perhaps two miles long and nearly one mile across its broadest part projecting into the sand hills and extremely dense. Within its southern fringe lies Nazwa, a small, compact unwall'd village of some 300 inhabitants of the Albu Sabban subsection. About a quarter of a mile south of Nazwa lie the two wall'd villages of Quaiz and Nuaima with only a few yards between them; the former containing 300 souls of the Albu Hasan subsection while the latter is occupied by the Buraik, some 400 all told. The walls of both villages are pierced at frequent intervals by low doorways giving direct access to the outer houses while in the case of Nuaima there is a regular gateway on the north side. Towards the eastern extremity of this section lie the remains of the hamlet of Darsa (generally called Hanabija) in the bed of the wadi. This village reduced by feuds with the Amur population of Ruwaisa to a state bordering on desolation was finally swept off the face of the earth by last year's flood and all that remains of it is a few houses standing in a patch of cornfields lying slightly out of the main course of

the flood and an extensive patch of palm stumps, half-buried in sand to remind its twenty or thirty inhabitants of the feuds of their ancestors.

The ruins of Ruwaisa lie about one mile south-east of Hanabija and shelter about twenty persons—the sole remnant of the prosperous Amur colony which migrated on account of the feuds above mentioned to Tamra.

Immediately beyond these ruins lies the last or Sharafa section of the wadi, a scattered group of palm-groves of unequal quality astride the channel with a number of separate *qasrs* and three small hamlets in a bunch on the right bank. As the name of the section suggests, the population belongs to a Dawasir group called Sharafa generally reckoned as a subsection of the Misaara and almost certainly related to it though it acts independently of the main group and claims to be an independent section. As regards the nomenclature of the three hamlets, one fair sized and two small shapeless unwallied groups of mud huts, containing with the neighbouring *qasrs* a total population of about 500 souls, there seems to be a difference of opinion which is solved by calling the whole trio by the single name of Al Sharafa. The name of the largest hamlet appears, however, to be Mishrif while the other two are designated Uwaidhat; the name Thamamiya, which appears in Hunter's map, attaches only to a single well.

It will be gathered from the above brief account that, except for the very meagre representation of the Al Hasan section, the population of the wadi is a very fair epitome of the Dawasir tribe, a fact from which (as also from the general trend of tribal migrations) it may be inferred that the wadi was the first settlement occupied by the tribe on its arrival some centuries ago from the Yemen under the leadership of its common ancestor Zayid. What the original population of the wadi was local history does not relate, but it is generally believed that Zayid and his companions first settled here as the guests and under the protection of their predecessors and in due course waxing strong returned evil for good and ejected their hosts. It occurs to me as quite a plausible theory that the subsection of the Abat Dawasir whom I have had occasion to mention above represent the survivors of the aboriginal settlers of the wadi. In due course the new settlers increasing and multiplying sought new pastures further east

and north-east and thus scattered over the vast tract they now occupy, the complete severance of old ties by the Al Hasan being doubtless due to blood feuds surviving to this day by constant renewal.

At a rough estimate based on the figures given above the total settled population of the wadi is about 9,000 souls of whom perhaps 2,000 are negroes, but it must be borne in mind that the nomad counterparts of the various settled elements own extensive proprietary interests in the date-groves and swell the population at harvest time. What relation the numbers of these nomads, whose grazing grounds lie mainly in the Nafudh Dahi to the north, bear to those of the settled groups it is difficult to say, but I think it would be reasonable to assume that two persons in every three are of nomadic habits. A calculation on this basis would make the total population dependent on the wadi some 21,000 Dawasir and 2,000 negroes or 23,000 souls in all.

Of the agricultural aspect of the wadi it is unnecessary to say much; the staple item of cultivation is of course dates, some of the groves being of extraordinary density; wheat is largely grown, though this year there has naturally been a falling off in the area sown owing to the destruction of so many wells by the flood; there is the usual variety of fruit trees and finally vegetables are much in evidence. While on the subject of foodstuffs I may remark with reference to the meat market of Dam (*vide* "Handbook of Arabia") that the people of the wadi and of Southern Nejd generally seldom enjoy the luxury of a meat meal, their dietary being strictly limited to wheat boiled whole and known as Jirish (I think identical with the *Qaimi* of Northern Nejd and the *Burghul* of Syria), milk and dates.

The payment of revenue to the Riyadh treasury, so long in abeyance during the disturbed reign of Abdulla and the subsequent occupation by Ibn Rashid, who never effectively occupied Sulaiyyil and the wadi, has now for several years been strictly enforced. Revenue is collected in kind at the rate of five per cent of the gross produce of dates and corn; the result of last year's collection in the wadi and Sulaiyyil being as follows:—

	Wadi.	Sulaiyyil.	Total.
Dates	23,000 Sas*	9,000 Sas	32,000 Sas
Corn	14,000 „	6,000 „	20,000 „

* The Sa is equivalent to two Waznas and the Wazna is a weight based on the dollar, one Wazna being equivalent to sixty dollars in weight in the wadi, fifty-five dollars at Sulaiyyil and fifty to fifty-two in the Qasim.

With reference to these figures it is interesting to note that the treasury share of dates from Saih (in the Aflaj), where the rate of tax is ten per cent owing to its possession of facilities for perennial flow irrigation, amounted two years ago to 46,000 Sas.

As regards the climate experienced during the period between May 23 when I reached Sulaiyyil and June 6 when I finally quitted the wadi area, a period, it should be noted, when at this latitude* and at this time of the year the sun was practically vertically overhead at noon, my general impression was that it was surprisingly agreeable. The maximum temperature recorded during this period was 110·3 F. on May 26 at Tamra, while on two occasions in the wadi the 100 degrees mark was not reached; on the whole the wadi maximum temperature ruled lower than those recorded during the days spent at Sulaiyyil, Tamra, and Kimida, the average maximum during the first seven days being between 108° and 109°, while that of our sojourn at the wadi was only 102° and would have been considerably lower but for a reading of 107·6° on June 3. The appearance of the Pleiades is, whether rightly or wrongly I cannot say, as signed locally as the cause of the sudden modification of the temperature. The maximum temperature registered was actually only 64° F. on the last day of the period, but the next lowest figure was 70° with an average of about 72°, while during the days spent at the wadi itself I was generally not up early enough to record a proper minimum. The prevailing wind throughout the period was from the north with occasional sudden changes to all the other points of the compass. From this record it will be seen that the climate conditions of the south are far from irksome—a fact on which the people of the wadi pride themselves not a little as also on the extreme dryness and purity of their atmosphere.

On the afternoon of June 5 we said goodbye to the Amir and retraced our steps past the northern wall of Dam, now no longer interested in our doings, down the valley to Raka, where we camped for the night; and on the following day we made a serious start on our long return journey, steering straight for the northern barrier of Tuwaiq at first ENE. and later north-east over the rolling Nafudh, known vaguely as Qaas, which by gradual degrees developed into a sandy plain. In due course

* Roughly Lat. 21° N.

the sand gave way to a broad expanse of gritty soil and, as we approached the escarpment, we entered on a wide strip of herbage known as Al Haiya and marking the course of such drainage as finds its way down the west side of the plateau and flows down to the wadi at the Tamra gap. This depression apparently extends north along the edge of the escarpment as far as the border of the Nafudh Daih and is fed by a number of petty rivulets descending from the plateau through steep ravines. It was towards one of these ravines, known as Shaib Kumaih, that we shaped our course, reaching and camping for the night under the precipitous escarpment at its point of issue therefrom after a march of some eighteen miles from Raka and twenty-seven from Dam, our height above sea-level being about 2,400 feet.

On June 7 we ascended Shaib Kumaih, a striking gorge down which the torrent bed descended steeply between gaunt weather-worn buttresses of sandstone rock, confined to a narrow channel by great boulders and masses of debris fallen from the hillside and in one place completely blocked by a sheer wall of rock, the negotiation of which was an extremely delicate task and resulted in one of our camels coming down so badly that it had to be destroyed the same evening—an accident which though regrettable was not altogether unwelcome as we had had our last meat at the wadi on the 5th and were not likely to fall in with shepherds for several days. Our course up the Shaib ran south-east until, after about three miles of a very toilsome passage, we reached its head in a comparatively wide depression. On the right lay a solid barrier, while on the left a very narrow tongue-like ridge separated the valley of Shaib Kumaih, in which we were, from that of Shaib Kumah on the other side, the latter running down from the inner mass of broken hill-country practically due south into the Sulaiyyil basin.

We now climbed up the steep slope to the summit of the tongue, along which a precarious path, scarcely ten feet in width with sheer falls on either side, led for half a mile northward to the edge of the plateau, and another mile in the same direction brought us to a cairn some 2,900 feet above sea-level where we rested to let the camels recover from their recent exertion and to take in the wide view of upland and plain around us. To the west extended the bare sand desert of the wadi, south-east lay Sulaiyyil, and southward beyond the rough extremities

of Northern Tuwaiq the horizon was bounded by the clear-cut line of the southern escarpment: all else was Tuwaiq, the broad barrier of Northern Tuwaiq lying between plain and plain and furrowed internally by countless ravines cleaving the plateau into a jumble of ridges.

From this point on until we reached Riyadh our course lay, with but few and unimportant breaks towards the end of the journey, along the broad back of Tuwaiq, whose plateau, sloping gently, so far as my observations are reliable, from north to south and from west to east, and averaging some twenty-five to thirty miles in breadth, falls for geographical purposes from south to north into four well-marked divisions, namely:—

- (1) The catchment area of Wadi Dawasir.
- (2) The catchment area of the Maqran.
- (3) The hill district of Aflaj.
- (4) The catchment area of the Sahaba.

The first of these divisions, on which we now entered, extends some forty miles from the northern border of the Sulaiyyil basin northwards and about twenty miles from west to east, comprising for the most part a ragged jumble of ravines and ridges running down from both sides towards the central depression of the Maragha Majma valley. On the east of this tract lies the well-marked ridge bordering the Hamam trough, while between its western edge and the outer rim of the Tuwaiq escarpment lies a thin strip of typical bare plateau merging imperceptibly, as it extends southward, in the lumpy ravine track. Our course now lay northward for about seven miles over the latter across or past the heads of a number of unimportant Shaibs which run down into the two main channels of Kumah and Wara and so into the Sulaiyyil basin. We were now close up to the edge of the western escarpment whence our course ran diagonally north-east across the plateau strip to the edge of the ravine tract along which we followed NNE. up to the watershed, a distance of rather less than thirty miles. The plateau generally sloped south-eastward traversed by little runnels concentrating at certain points to form the heads of a number of bold ravines which ran down in a uniform south-east direction to join the Maragha. The first of these ravines in which we halted for the night is Shaib Sudaira, in whose bed of solid well-worn limestone rock is a group of three pools of

excellent and unfailing water called Khanuqa, the largest lying in a triangular rock-bound fissure of great depth surrounded by luxuriant herbage.

The following morning we skirted the heads of three important ravines known as Tharar, Nir, and Hifna. The first-named is waterless but well wooded; at the head of the second lies a wide, deep pool flanked by high precipitous walls of rock and called Umm Al Hisha; while the third is a fine rock-bound valley containing a number of shallow pools in its boulder-strewn bed. The sides of the valley are worn into great cave-like hollows of which we took advantage for a siesta during the middle of the day, having marched some eleven miles from our starting point. The rest of the day's journey lay alongside a low ridge on the eastern extremity of the plateau and we halted for the night near some prominent knolls called Khataiyim al Qurun.

There now remained but a single important ravine belonging to the Maragha group, namely Shaib Qurun, a broad depression formed somewhat to the west of our course by a confluence of smaller depressions and running across our path into the rough hills on the right. This was about two and a half miles from our camp of the previous night and a further march of some seven miles up the course of a shallow depression called Dahlat al Baqar, which runs down into the Qurun, brought us to a low ridge extending practically all the way across the plateau and forming the watershed between the Wadi Dawasir and Maqran drainages.

The next division of the Tuwaiq barrier extends some twenty-five miles in length from south to north and perhaps rather less than that distance across. The whole of this area drains down towards the Maqran depression through two main channels, namely the Maqua and Mahbat, as the upper reaches of the Dhabahiyya and Shutba respectively are called. From the watershed we looked down on a broad expanse of plateau to our left sloping down from the distant rim of the outer escarpment towards a central bushy hollow, from the eastern edge of which ran the shallow depression of Maqua down to and along the outer edge of the low ridge which marked the western extremity of the ravine tract. Descending into and following this depression for eight miles in a northerly direction we reached the point where it falls sharply over a low precipice into a rock-bound ravine, along whose bed we continued for another mile to a

perennial spring called Shuqaib where we camped for the night under a solitary palm. The plateau was now out of sight and we were within the fringe of the ravine tract, the cliffs on either side of the Maqua being some twenty to thirty feet high and its bed, partly of sand and partly covered with great outcropping slabs of limestone rock, about fifty yards in width. The spring was surrounded by a luxuriant growth of reeds and grasses and beside it numerous shallow pools of water lay as the result of recent floods in depressions in the great rock slabs—together a delightful camping place. The next day (June 10) we resumed our march down the ravine, which from this point turns east and begins to be known as Dhabahiyya; from the bend for a distance of nearly two miles extended a straggling plantation of palms dotted about the valley in small groups and belonging to the Al Hanaish and Al Suwailim subsections of Wuddain; along the storm channel at intervals lay numerous water-pools of varying size. Having marched some four miles from our starting point to the confluence of a Shaib called Siri with the Dhabahiyya we rose out of the latter on to a rough upland tract and marched in a northerly direction along a ridge (on our right) called Khurum. Five miles on we entered a ravine called Mughara draining the plateau, which now began to assert itself again, northwards and after a midday halt at a group of pools in its bed pursued our course for four miles in the same direction (slightly east of north) until we entered the Mahbat, a third Shaib called Kilawa joining the confluence. The Mahbat, some 300 yards broad, is a fine valley with a thick undergrowth of grasses and bushes with scattered remnants at this point of the palms and buildings of an old abandoned settlement known as Dilham owned like the settlement of Shutba, about eight or ten miles downstream, by a Dawasir group called Al Khadhran, belonging I think to the Wuddain section. The course of the valley at this point is eastward but about two miles upstream it turns at right angles towards the north between cliffs not less than 100 feet high. Above and below the confluence was water in abundance in numerous pools but such wells as there are are in ruins and contain only foul water. We now ascended the steep left bank of the Mahbat on to a secondary plateau in the middle of the ravine tract, and marching along the edge of the channel at first gradually diverged from it until at a distance of about five miles from the confluence

we reached a low ridge forming the watershed between it and the tributaries of the Hunnu. We were now on the southern boundary of the Aflaj hill district and camped in a shallow depression called Shaib Rahaba. This point was some 3,050 feet above sea-level and ninety-eight miles from the wadi.

The hill section of the Aflaj province, by which from the geographical point of view we may understand that portion of the Tuwaiq plateau which constitutes the catchment area for the watercourses of the Aflaj plain and the Rajd plateau from Shaib Hunnu in the south to Shaib Daiya in the north, extends some seventy miles from north to south and from twenty-five to thirty miles across. The administrative limits of the jurisdiction of the Amir of Aflaj however include a slightly larger area than the above in that they embrace the settlement of Shutba on the south and the first few tributaries of the Sahaba drainage in so far as these are frequented by the Badawin sections of tribal units settled in the Aflaj villages.

The first nine miles of our course on June 11 lay NNE. over much the same sort of country as we had traversed during the previous days with the difference that the main plateau now came round again from the projecting part of the ravine tract into which we had plunged on entering the Maqua and the outer ridge of the ravine tract now lay to our right. Crossing the three shaibs of Rahaba, Sudair, and Turaifa, all of which drain down to the Hunnu, we reached a low ridge extending from that on our right straight across the plateau. The scene now changed. To our left front lay the plateau sloping down from the rim of its escarpment eastward to a wide semicircular ridge of bold outline and considerable height, one end of which was practically a continuation of the ridge on which we stood while the other almost touched the edge of the escarpment ahead of us to the north. We were in fact looking down on the Haddar plain, though nothing could be seen of the settlement itself, which lay in a deep hollow near a rugged gap in the semicircle.

A march of three and a half miles NNE. down the slope and generally along the course of a shallow depression called Shaib Umm Diqqa brought us to a deep crack in the plateau into which the Shaib runs over a steep precipice changing its name at the same time to Shaib Hasraj. We followed the right bank of the latter for about two miles to the head of a narrow

but not difficult path down to its bed, in which lay a number of considerable pools of torrent water. Here for the first time since leaving Raka we fell in with signs of human habitation, a few black tents being scattered about the valley.

Hence after a brief siesta we resumed our march in the afternoon down the valley above which on both sides towered precipitous cliffs 100 to 150 feet high. As we advanced the Shaib opened out as other shaibs ran into it until at a distance of about two miles from our camp it spread out into a broad rock-girt hollow at the end of which stood the oasis of Haddar at the head of the gorge through which the Hasraj runs to join the Hunnu in the plains.

Backed by a steep high escarpment and girt around by gaunt crags Haddar, which lies at an elevation of 2,600 feet at a distance of 116 miles from the wadi, with its scattered palm-groves and little mud hamlets partially hidden by a screen of verdure is an extremely picturesque settlement, which according to local report and to judge by its ruins has seen better days. At present it comprises four distinct sections and is traversed from end to end by the Hasraj storm channel whose waters are diverted into the palm-groves on either side by primitive barriers of palm branches and sand. Following down the Shaib one first comes to a small Wuddain settlement on the right bank consisting of seven or eight inferior palm-groves and a number of *gasrs* containing perhaps a total population of 100 souls of the Khulaiyif subsection; the second section lying on the same bank is the most flourishing part of the oasis consisting of some fifteen excellent palm-groves with thick undergrowth of fruit trees, vegetables, etc., a considerable area of cornfields, a number of isolated *gasrs* and a small unwallled but compact hamlet, the total population of this section may be 300 persons, all of the Misarir subsection of the Misaara Dawasir; the rest of the oasis, except for two small palm-groves on the right bank, lies on the left bank, one section containing a small hamlet and outlying *gasrs* situated in the midst of a dozen palm-groves and some corn patches being about half a mile downstream of the Misarir section; while the other, called Fuhail, lies a full mile further down at the head of the gorge and consists of a rather larger hamlet but only five or six groves; both these sections belong to the Nutaifat subsection of the Jumaila section of Anaza, already mentioned as former settlers of

Badia, Fuhail containing 200 and the other section 150 inhabitants; between them lies a considerable but scattered group of ruined *qasrs* along the left bank of the torrent.

Between Haddar and the semicircular escarpment two lower ridges called Shab and Farda intervene, the former ending in a prominent headland known as Khashm Shab while the latter comprises two fantastic weathern-worn crags connected by a low saddle. Between these ridges the two depressions of Dahla and Shaib Nisaq run down from the plateau towards the Hasraj, while between the Farda ridge and the escarpment behind it runs a ravine called Shaib Turaifa rising in some rough hillocks connecting the ridge and escarpment and running down to join the Hasraj in the neighbourhood of the Haddar gorge. From the top of the escarpment extends a wide triangular tableland separating the Haddar area from that of Hamar with its apex at the headland marking the extremity of the semicircular escarpment; over this plateau lies a short cut between the two oases practicable only for foot passengers and lightly loaded dhaluls owing to the steep ascent and descent on either side.

The course actually taken by us on the day after our arrival at Haddar lay nearly due north diagonally across the Dahla Wisaq and Turaifa close under Khashm Shab and the more northerly of the Farda crags and then over the rough hillock tract already mentioned, which spreads over practically the whole area between the escarpment and the western rim of Tuwaiq, along the semicircular escarpment to its headland extremity called Khashm Khartam, fourteen miles from Haddar. From this point 3,350 feet above sea-level with the gaunt headland towering another 300 feet or so above the road we had a magnificent view of the country westward of Tuwaiq. A narrow ledge, over which the road runs down to the valley of Hamar on the other side, connects the headland with a confused mass of hilly ground extending only two or three miles to the western rim of Tuwaiq beyond which lies the vast sand expanse of Nafudh Dahi running north-east to south-west more or less parallel to Tuwaiq behind a narrow strip of plain. Beyond it again lay the mountains of Nejd proper—Hadhb Dawasir far away to the south-west, the bold mountain mass of Hasat Qahtan, also seen on my journey to Taif, the low barrier of the Ardh range to the west and a large mountain mass called Samakh to

the WNW.—a scene which I was destined to behold once more from another point and which serves to fill in the gap between my present route and that of my Taif journey.

We now turned north-west down the course of Shaib Kiriz, the Batin al Hamar of the Aflaj plain, and camped in its bed about one and a half miles from Khashm Khartam at the south-western corner of a narrow oblong strip of plateau lying south-west by north-east and hemmed in between the rim of Tuwaiq along the north-west flank, the hillock tract at the south-west end, the northern flank of the Khartam tableland to south-east and a similar escarpment along the north-east side ending practically on the rim of Tuwaiq ; at the south-eastern corner of this oblong lay Hamar while much of the central space was occupied with low hill masses, the slope of the whole being towards the south-eastern corner where the Kiriz runs through the oasis of Hamar into the gorge which conducts it to the plain.

The oasis of Hamar, about 2,600 feet above sea-level and 145 miles by our route from the wadi is generally acknowledged to be the premier settlement of the Aflaj hill tract ; it comprises a palm-belt about one and a half miles long and half a mile across at its broadest point lying on both banks of the Kiriz from the head of the gorge upwards ; its wells varying according to situation and season from six to thirteen fathoms in depth are numerous ; its groves are on the whole dense and full of a rich undergrowth including the pomegranate which we now saw again for the first time since leaving Badia on the outward journey ; extensive patches of cornfields lie here and there between the palm-groves and to the north of the oasis up the channel of a tributary of the Kiriz called Dhaman which runs down from and along the escarpment enclosing the plateau on the north-east ; and finally at about the middle of the oasis on the left bank of the Sufasha, another tributary of the Kiriz coming down from the low hills in the central portion of the plateau, lies a small hamlet which with some twenty *qasrs* scattered up and down the Kiriz accommodates a population of some 500 souls. About one and a half miles downstream of the oasis in the gorge lie the ruins of two small hamlets of Muwaisil in a fairly thick grove of tamarisks ; about the same distance upstream on the banks of the Kiriz are a few abandoned wells and *qasrs* known as Umm Shajara ; and about ten or

twelve miles downstream of Muwaisil almost at the edge of the Tuwaiq slope towards the plain stands Wasit, said to be a small hamlet of 100 souls in a small palm-strip.

It appears that the original occupants of Hamar and the outlying dependencies above mentioned were the Nutaifat (Anaza) who were dispossessed by the Swakara subsection of Al Hasan (Dawasir) some three generations back when the grandfather of the present Amir, Hadh Dhal ibn Uqaiyan, and his followers established themselves in this tract. In those days Haddar was a more flourishing spot than it now is and its people claimed and enforced proprietary rights in the grazing of the Kiriz and the other streams of the Hamar basin; Uqaiyan not being strong enough to resist the claims of Haddar entered into negotiations which resulted in his purchase of all the Haddar rights, since when the Kiriz and its tributaries have been strictly preserved against all foreign grazing, such reserved tracts being known as *Hajr* or *Hima*, i.e. protected areas. The Sulaiyyil basin is another instance of such protection and I shall shortly have occasion to note yet another in connection with Hilma and Hauta. This practice of protection is unknown in upper Nejd except in the solitary instance of the Khafs valley which is reserved for the grazing of Ibn Saud's own herds and flocks.

In spite of the fact that Ramdhân had already begun—a month during which it is very unusual for settled elements to leave their homes—the population of Hamar, on getting wind of our coming, had for the most part (including the Amir) migrated down the valley to Wasit to show what they thought of us. The people of Haddar on the contrary had been unexpectedly cordial and obliging.

We left Hamar on the morning of June 14 in a NNW. direction up the valley of the Dhaman with the escarpment of its high ridge on our right, and when we had gone some six miles I took advantage of our near approach to the western edge of the plateau to make a detour to the head of the Juwaifa gorge down whose gaunt precipitous side runs the Hamar-Qualiyya road and the Juwaifa torrent, the latter often emerging from the gorge flowing northward along the slope of the narrow plain between the Tuwaiq and Nafudh Dahi to join Wadi Birk. The exact point at which the slope of this plain begins to run

in this direction I was unable to discover but it appears to be somewhere not far south of the latitude of Haddar, from which southward of course the slope is toward Wadi Dawasir.

The Juwaifa gorge constitutes a defensive position of great natural strength and would be totally impracticable for wheeled traffic of any sort. It is reputed to have been the scene of a sanguinary defeat of the Turks (Egyptians) by the Badawin of the Tuwaiq at some period of the Turkish (Egyptian) occupation of Nejd after its capture by Ibrahim Pasha.

Another three and a half miles in the same general direction brought us to Khashm Ashaira, the final headland of the Dhaman ridge, over which just short of the headland we reached a narrow pass formed by a slight depression of the ridge. From here some 3,500 feet above sea-level (the summit of the headland must be some 200 or 300 feet higher) we took a final glimpse of the plains and hills of Nejd before descending into the Shaib Ashaira, a pleasing pastoral valley about a quarter of a mile broad between cliffs varying from fifty to 100 feet in height running due east or very slightly south of east across the whole breadth of the plateau and emerging into the plain in the neighbourhood of Umm Shinadhir and Wusaila where it passes under the names of Ghail or Umm al Jurf.

At a distance of five miles down the valley we passed the remains of an old settlement called Jidawiya—abandoned corn-fields and ruined wells and *qasrs*—among whose debris were pitched some fifteen black tents of Qahtan shepherds. Our passage seemed to arouse a certain amount of interest among the occupants of the tents and before I realized what was happening an altercation had begun between some of them and two of our party. “You and your master (Ibn Saud) are infidels,” said they, “God’s curse upon the lot of you.” This was too much for a burly slave from the Sudan who with more pluck than good sense set his *dhalul* to a trot in the direction of the offenders, dismounted rifle in hand and was soon being rolled in the dust by half a dozen stout shepherds. I thought we really were in for trouble this time as our party loaded up and flocked to the rescue. However, there was nothing to do but to sit down and await events. Angry exchanges of abuse mingled with the cries of women as friend and foe stood in inextricable confusion round the miscreants and their victim, and when both sides had exhausted their vocabularies they

suddenly parted in silence and we continued our journey. My comments on the occurrence and its causes were not appreciated.

A southward bend of the valley brought us after three miles more to the ruined wells of Hafira, whence another mile eastward brought us to Malaija, a miserable straggling plantation of palms with a number of wells in a very pretty bend of the valley, thickly covered with reedy grasses, wild fig trees, thorn bushes and the like. Rounding the bend we found ourselves close to the first groves of Sitara, one of the prettiest settlements I have seen in Arabia. The high cliffs of the valley ran down to low slopes on either side, a strip of palms ran down both sides of the channel and in the gap slightly projecting from the left lay the little mud fort of Sitara on the top of a low mound. Behind lay a belt of palms in a bend of the valley backed by the low cliff of the right bank.

The valley here makes a crescent-shaped bend, the palm-belt on the right bank or outer edge of the crescent extending rather more than a mile in length with an average breadth of some fifty yards, though the two best groves extend to a depth of some 200 yards into little bays in the cliff. Along the edge of this strip runs the torrent bed in which a number of Badawin were encamped for the fast. On the left bank of the stream opposite the centre of the current stood the low mound, a projection from the receding left bank cliff, on which was the fort or fortified hamlet, an oblong well-built building about 100 yards by sixty with eight towers and three low doors giving access to the interior. The total population of this fort and a small isolated *qasr* in one of the palm-groves cannot be above fifty souls, the fort belonging to, and its population comprising the dependents of, Abdulla ibn Dhib, one of the chiefs of the Qubabina section of the Suhul, to whom the whole oasis belongs.

Above the fort, *i.e.* on the left bank of the valley, is a small strip of palms about a quarter of a mile in length and below it on the same bank are three isolated groves.

Such is Sitara, 167 miles from the wadi, though less if one avails oneself of the short cuts between Haddar and Hamar and between the latter and Sitara, and situated at an elevation of 2,900 feet above sea-level. Water is abundant at a distance of three to four fathoms below ground-level.

The following morning we resumed our march down the valley passing the ruined wells of Junaina four miles down and

reaching a wide bulge of the valley, three miles on, in which we halted for breakfast under a high ledge of rock called Abudidi to which, it is related, worship and sacrifices were offered in the days of the "Ignorance", *i.e.* before the rise of Mohammed ibn Abdul Wahhab.

Resuming our march we entered almost immediately into the outskirts of Ghail, a three-mile stretch of well-irrigated corn cultivation suffering badly from the effects of human inertia and neglect and extending from here to the western extremity of the actual oasis of that name.

The name Ghail appears to signify running water other than seasonal floods, generally as in this case applied to scattered outcrops of a subterranean water supply which runs for short distances until exhausted by irrigation or held up by shallow hollows. Such outcrops are seldom perennial and generally dwindle to nothing as the summer advances.

The oasis of Ghail, by far the most striking of the hill tract and indeed surpassed by few in the plains, extends about two miles down the valley in length with an average breadth of half a mile between precipitous 100 foot cliffs, the whole space between these limits being covered by a dense mass of palms with a thick undergrowth of fruit trees and vegetables through which the narrow storm channel pursues a tortuous course. The eastern end of the oasis is completely closed in by a sharp bend of the valley, at the head of which stands a tall watchtower. A similar watchtower stands at the western extremity of the oasis clear of the palms closed to a ruined fort of unusual size. In the oasis itself are a number of scattered *qasrs* and three hamlets namely Al Amair, Badia, and Mishrif in that order from west to east.

The first-named of these hamlets contains about 150 persons; Badia, which lies in three sections along the left bank of the storm channel opposite a short strip of running water about half a mile long, contains 300, while Mishrif on the right bank lower down consists of two sections containing perhaps 100 souls. The population of the outlying *qasrs* may number some 150 in all, thus giving a total population for the oasis of some 700 souls, the greater number of whom are miscellaneous Beni Khadhir tenants dependent on the Badwain owners of the oasis, namely the Qubabina section of the Suhul. Hamiad ibn

Thallab, one of the leading chiefs of the section resides in the central unit of the Badia hamlet. All the hamlets are unwallled and somewhat straggling.

We were extremely well received here partly owing to the comparative broadmindness of the Suhul tribe generally and the Qubabina section in particular, whose chiefs are men of great character and reputation; and partly because the Amir of the Aflaj, having heard wild Badawin tales of our reception in the wadi, sent a representative to see that we had all we wanted. Here for the first time during the journey we enjoyed the luxury of fresh fruit in the shape of grapes of inferior quality and barely ripe. Practically all the fruits of Nejd appear to ripen between the end of June and the end of August, the first being watermelons (at Riyadh only), the next grapes, then figs, dates, peaches, etc.

On the following day we ascended out of the Ashaira valley, which runs down into the plain at a distance of some four or five miles from Ghail, by a steep extremely difficult path up the left bank on to the plateau above; we were now some 2,700 feet above sea-level (Ghail being between 2,500 and 2,600) on a vast expanse of somewhat undulating stony plateau sloping gently down to the Aflaj plain and the Rajd plateau. In the former the palms of Laila, Kharfa, and Wusaila could be seen easily while in the latter the landmarks, such as they were, of our outward journey were readily distinguishable throughout the day. From this height the Rajd plateau looked much rougher and more broken up than it had appeared from a lower level and stretched away, a lumpy plain, towards the distant Biyadh. On our left the view was strictly limited owing to the broken nature of the plateau.

All day the scenery remained unalteringly monotonous as we traversed shaib after shaib of those that feed the channels of the Rajd plateau. The first important channel to be crossed, however, was a tributary of the Ashaira, namely Haradha, in whose upper reaches near the western boundary of Tuwaiq lies the oasis of the same name, apparently a small hamlet and plantation of little importance.

Next we traversed in turn some half-a-dozen Shaibs, generally with fairly high banks, all tributaries of the twin channel of Shaibs Ars and Mara, the two most important of these being Umm al Jurf (which has no connection with the stream of the same name near Umm Shinadhir) and Sudairat. These were

succeeded by a series of unimportant streams draining down to Shaib Ghina, camping in one of which for the night, we pursued our march the following morning across the broad Shaib Daraiy, to Shaib Ghulghul, both of these running down to the Daiya.

Up to this point our march since we left Ghail had been practically due north over entirely waterless country. We now however reached water at the single well of Warhiya in the bed of the Ghulghul at a distance of about eighteen miles from Ghail; the well is much frequented by Badawin from all the country round, this and a similar single well called Qalha some miles down the same stream being the only watering places between Ghail and Baaija; the water is good but the supply is liable to run out if large demands are made on it, as we found on arriving just after a Qahtan encampment and its flocks had had their fill. A large party of Qubabina, who arrived after us on their way to spend Ramdhân at Ghail, had to resign themselves to getting no water till late in the evening or even the following morning as it would take some time for the well to recover from our depredations sufficiently to supply their 150 camels and nearly that number of men, women, and children.

Shaib Ghulghul is for all practical purposes the northern boundary of the Aflaj hill tract, the actual watershed between the Rajd streams and the Sahaba system lying a couple of miles further north in some rough ground separating two small ravines called, respectively, Nadh Ghulghul and Nadh Baaija. To the right now lay the Insalah downs, while to the left was the dreary expanse of the broken plateau of Tuwaiq.

On reaching the Nadh Baaija we entered upon the fourth and most extensive section of Tuwaiq, namely the catchment area of the Sahaba, extending from this point northwards to an immense distance certainly to the Haisiya-Aiyaina tract and possibly far beyond. This tract it will be convenient for the purpose of detailed description to sub-divide into four further subsections as follows, namely :—

- (1) The catchment area of the Ajaimi.
- (2) The district of Al Fara.
- (3) Jebel Alaiya.
- (4) Aridh.

The first of these sections comprises a strip of the Tuwaiq plateau barely twelve miles in length from south to north, but extending over its whole breadth from the western rim to the eastern plain. Bounded on the north by Wadi Birk, it contains two imposing ravines running across the whole breadth of the plateau, namely, Shaib Ahmara to the south and Shaib Tilha on the north, both of which as we have seen run down into the Halfawi and so into the Ajaimi.

Following the Nadh Baaija for three miles northward we entered Shaib Ahmara, which, coming down from the west in a valley about a quarter of a mile broad between cliffs of from fifty to seventy feet high, turns to the north and runs in that direction some three and a half miles until the single well of Baaija is reached—a fine well with an inexhaustible supply of water at a depth of fifteen fathoms, round which in a wide bulge of the valley was a most imposing collection of some fifty or more black tents of various sizes belonging mostly to the Qubabina and partly to the Shakara (Al Hasan).

From the Baaija well the Shaib resumes its easterly (with slight tendency to north) course, which we followed the next day for some five miles to its point of exit to the plains, into which we emerged for a brief run of four miles along the low eastern extremity of Tuwaiq. At this point we crossed the shallow bed of Shaib Tilha not far from the point where it issues from the ravine in which it descends across the plateau. We now turned due north still along the outer slope of Tuwaiq but soon found ourselves entering a wide bay into the latter, forming as it were, a miniature delta for Wadi Birk, whose actual mouth we reached four miles beyond the point at which we crossed the Tilha. The channel of the Birk at this point is about a quarter of a mile or rather more across but its containing banks are of no great height though it is said, probably truly, that further up the channel runs between precipices of tremendous height.

The configuration of the drainage system at this point is extraordinarily interesting and at first sight a little puzzling. Wadi Birk comes down from the west into the bay just mentioned down which it runs due south for a short distance before turning north-east to join the Ajaimi; the opposite side of the bay opens out into a wide channel, which at first sight seems to be either a branch or a tributary of the Birk; in point of fact it is

neither, being a shaib of no great length called Nasabiya, which, rising at the end of a blind valley in the Tuwaiq slope about three miles north-east of the mouth of Birk, runs down to within half a mile of the latter and for no apparent reason—there being no visible obstacle in its path—turns sharply to the west into the heart of the plateau and, changing its name at the same time to Faria, circles round from west to north-west, from north-west to north and then north-east and uniting with the Majma to form the Fara turns eastward under its new name, to be crossed by us later on, and finally runs north-east in two branches into the plain of Kharj. At this particular point therefore we have the phenomena of two drainage channels of first-rate importance running side by side in diametrically opposite directions, the one (Birk) following the obvious line of least resistance, *i.e.* down the slope of the plateau and out on to the plain, while the other deliberately runs as it were against the grain carving out for itself a passage through the heart of the massive barrier. The mouth of Birk lies at an elevation of 2,350 feet above sea-level while the head of the Nasabiya, in which we halted for the night is some fifty feet higher.

We were now in the district of Al Fara,* a district which, though small in actual superficial area, is the most populous and prosperous settled tract of Nejd; is renowned even in a country so insular as Nejd for the ferocious insularity of its denizens; and, incidentally, has during the last half century played a prominent part in the endless struggles for dominion which have drenched the country with blood and reduced much of it to a state of ruin and decay from which it is now only beginning to recover.

The district comprises a section of the Tuwaiq barely ten to twelve miles across from north to south and extending perhaps some twenty-five miles from west to east across the whole breadth of the plateau. It is bounded on the south by Wadi Birk and on the north by the Fara or Majma, as it is called in its upper reaches, this valley and its tributary, the Faria, draining the district into the eastern plain and containing within their precipitous cliffs three of the finest oases in Nejd—Hauta, the capital, at the confluence of the Majma and Faria; Hariq in the upper reaches of the former, and Hilwa in the Faria

* The names Fara, Faria, and Faraa should not be confused with each other—the vernacular spelling being *فرع*, *فارع* and *فرعه* respectively.

above Hauta. Hariq I did not see, while of Hilwa and Hauta I had but the merest glimpse and that by accident, as, when we broke camp on the morning of June 19 and climbed out of the bed of the Nasabiya on to the plateau above, I little dreamed that the day's journey would bring us so near to these places as to make a detour to points on the plateau commanding a view of them practicable.

Our course lay slightly east of north for about seven miles over most unpromising country, our view being limited on the left by some rising ground between us and the Faria now running parallel to us at no great distance, while to the right we had an extensive view over the Shaara ridge of the Ajaimi plain to the dim line of the Khartam and Mishash Niswan ridges of the Biyadh beyond. As we progressed, however, the plateau opened up on the left gradually disclosing portions of the great cleft which marked the course of the Majma and it did not require a very wide detour from the road, which runs north-east to arrive at the head of a small Shaib called Mirhij, at whose junction with the Faria, barely one mile distant, lay the town of Hilwa, the chief settlement of Hauta, peeping out from behind a high cliff. At this point we made a brief halt of which I took advantage to make an excursion on foot to various points of vantage commanding views of all I was destined to see of the Hilwa and Hauta oases.

Of the former I saw only occasional groups of palms disclosed by dips in the right bank of the Faria. It appears to comprise a prosperous oasis from four to five miles in length running down to a point about one mile upstream of Hilla. At the southern or upstream end of the oasis lie three fair-sized hamlets called Quai (further south), Hilwa (in the middle) and Atiyan (north of the last-named) and lying close together, while a considerable number of isolated *qasrs* dot the rest of the oasis at frequent intervals, the total population of the settlement being perhaps 1,500 or 2,000, though said to be much more even than the latter figure. The population is largely Beni Tamim, mainly of the Husain section, and including Beni Khadhir elements.

The oasis of Hauta stands athwart the confluence of the Faria and Majma, which takes place about three miles north-west of the head of Shaib Mirhij. In this central space is a large block of palms, from which the main section of the oasis extends some seven or eight miles up the Majma between

precipitous cliffs to the important hamlet of Al Buraik; a straggling group of palms extends from the same centre down the Fara for a short distance, while a dense belt extends up the Faria to the point where Shaib Sulamiya runs into it. Upstream of this point lies the town of Hilwa which, so far as I was able to judge from the portion (about one third) of it, which I saw, extends some three-quarters of a mile in length with an average breadth of 300 yards; round Hilwa are scattered palm-groves extending for a short distance up the Faria beyond the end of the town and up the Shaib Mirhij, in which lie a number of *qasrs* and a fair-sized hamlet called Abu Tuyus; north of Hilwa at the Sulamiya junction lies a large hamlet called Amairiya above which in the same shaib are a number of *qasrs* with a few palms and a good deal of corn cultivation.

Hilwa is unwalled and contains a flourishing Suq, its population, of close on 10,000, comprising miscellaneous elements of Beni Khadhir and other stock, while the rest of the oasis is occupied exclusively by Beni Tamim of the Husain and Marshad sections, the former round the confluence and up the Faria and the latter up the Majma in which are apparently three other hamlets besides Al Buraik. The Beni Tamim element, which may amount to some 10,000 souls all told, originally came from the town of Hauta in Sudair at a time when Hariq was the only settlement in the Fara district, the new settlement which has risen to its present pitch of prosperity entirely owing to their labours, being long known as Hautat al Hariq.

The oasis of Hariq apparently lies some eight or nine miles west of the western extremity of the Hauta oasis up the Majma at the point where the latter comes into being by the confluence of five or six small streams running down from the outer edge of the Tuwaiq plateau. The oasis is some four or five miles in length from west to east and is said to contain a central town inhabited by 5,000 (probably an over estimate) persons, partly belonging to the Hazazina section of Anaza and partly miscellaneous Beni Khadhir, and two hamlets occupied respectively by Hazazina and the Khathalin section of the Subai, the total population of the oasis according to local reckoning being some 7,000 persons though this estimate should probably be reduced to between 4,000 and 5,000.

These three oases enjoy a high reputation for their dates and for the industry of the people in keeping their groves up to

a high standard of efficiency. Wells are abundant but deep (no less than seventeen fathoms in the Hauta oases) and are worked almost exclusively by camels, of which the grove owners possess immense numbers and for whose benefit they jealously preserve the grazing rights of the Faria, Majma, and Fara from end to end against all foreign intrusion. The Qubabina, whom we met at Baaija, had passed Hauta, by the high road on the plateau, a few days before and in reply to their request for permission to water at the wells of the town had been told that they would not be allowed a drop. The churlishness of the inhabitants is notorious and has even been known to go to the length of murdering their guest in cold blood, the brother of a man in my party having been done to death here not many years ago in the house of his host.

Secure in the impregnability of their mountain valley they defy the conventions of the land without shame or fear ; during Ibn Rashid's occupation of Nejd one of his officials was beaten with impunity in the public street of Hilla ; more recently the district declared for the Araif pretenders against Ibn Saud himself, but on that occasion Hariq paid a terrible penalty for its temerity and its example saved Hauta from a similar fate ; nevertheless, in spite of its timely submission on that occasion, Hauta still enjoys a greater degree of independence than any other settlement in Nejd, being allowed by tacit acquiescence of Ibn Saud the fullest measure of home rule, limited only by the condition that revenue be promptly paid and armed contingents furnished without demur to march under the royal banner. It may be noted that the scrupulous observance of these conditions since the Araif rebellion has up to date saved the district from the intrusion of outside officials, its administration being entrusted to the local headmen, each of whom exercises authority only within the limits of the tribe or section he represents.

A brief march of two miles still to the north took us across the Sulamiya shaib at a point about one mile above its junction with the Faria and about the same distance from its source in the eastern part of the plateau ; another mile and a half in the same direction brought us to the head of a small well-wooded ravine called Shaib Umm Hiran. Following this up for rather more than a mile we entered the sand-choked ravine of Umm Adyan separated by a very narrow slip of high cliff from the

channel of the Fara, at the mouth of which we made our midday halt in a considerable expanse of high sand dunes projecting out into the plain.

This point was 2,170 feet above sea-level, our course beyond it running northward along the outer edge of the long slope of Jebel Alaiya with the storm channel of the Fara parallel to us on the right at a distance of a quarter of a mile backed by a long narrow strip of Nafudh between it and the Shaara ridge beyond. On our right front opened a view of the Khashm Kalb and Abu Walad ridges with glimpses of the Kharj plain beyond.

Jebel Alaiya comprises a block of the Tuwaiq system, bounded on the south by the Fara and on the north by the great level-crossing of Shaib Nisah, the distance between these points being some sixty miles. It consists of a vast bare plateau sloping gently down to the east and rising abruptly at the western end to a high ridge overlooking the western escarpment; the plateau is scored by the courses of a bewildering number of ravines, running down independently into the plain, but congregating at its western edge in several primary channels to flow down into the Kharj valley. These channels in order from south to north are :—

(1) The Fara, whose tributaries are Shaibs Sulaim, Hamlan, Abu Sahra, Ashairan, and Ashariya.

(2) The Saut, in reality an old branch of the Fara and separated from it by a small tract of bare rising ground, its tributaries being Shaibs Quraina (three branches), Abu Farida, Qahlul, Abu Fuhaid, Umm Nakala, Tarsh, and Wuthailan, the last an important channel which usurps the place of the Saut and flows out into the plain round the southern end of Khashm Kalb, being known indifferently as Wuthailan and Saut; the tributaries joining this system from north of the Wuthailan being Shaibs Khamsa (two branches), Umm Salam, Dahla Quad, Mandasa, Tumair, Mawan, and Ghubaiyid.

(3) The Ain, whose southern tributaries are Shaibs Suwais (an important channel), Irza, and Sharaimida, while from the north it is joined by three channels collectively known as the Balajin (singular Baljan).

The point at which we had halted for our midday rest at the mouth of the Fara was marked by a small hill or prominence called Muraiqib, starting from which somewhat late in the

afternoon we passed an extensive group of ruins called Abu Sahra, said to have been a town in days long past, at rather less than three miles and camped one and a half miles beyond the ruins in the mouth of the unimportant Ashairan Shaib.

Resuming our march, still northward, on the morning of June 20 we soon passed the point at which the Saut diverges from the Fara—the latter striking north-east between the Nafudh (known as Ajniba) and the patch of bare stony upland already mentioned, while we followed up the former, a broad valley of firm loam between the upland and the edge of Tuwaiq.

Having marched some eight miles from our starting point we came to a small forest of acacias and other trees, which forms the boundary of the Hauta grazing preserve and immediately beyond which we reached and followed the tortuous pebbly channel of the Wuthailan. About four miles further on this channel strikes north-east along a projection of the Tuwaiq slope, across which we continued our course to re-enter the plain, now thickly wooded with acacias of various species, after a short run of two miles. We now crossed the Tumair Shaib, in whose upper course is a much frequented well, at its point of debouchment into the plain, and a couple of miles further on reached the Mawan Shaib and turned up it to the ruins of the ancient settlement of the same name, where we halted for the night and spent the whole of the following day to give our camels a much needed rest.

The main body of the Mawan settlement lies in a wide bulge of the Mawan valley, beyond which it extends upstream for a distance of about two miles. The ruins consists of *qasrs* built of mixed mud and masonry on and about the high cliffs which surround the valley; one *qasr* in particular built in steps down the slope of the right bank cliff, with its upper wall and towers running along the summit and commanding a wide view of the plateau around has its lower walls actually in the bed of the valley enclosing one or two wells, and was extremely imposing, while opposite it on the summit of a tongue of rock projecting from the left bank cliff stood another *qasr* of large dimensions, a considerable portion of which was still in a good state of preservation. The valley here contains a large number of wells, some abandoned and others still in use affording a good supply of water at a depth of four or five fathoms, but the most striking feature of the settlement is an extensive pond of

torrent water in a depression in the storm channel fed at the time of our visit and apparently until quite late in the summer by a *Ghail* or running stream. A visit up the valley revealed the fact that this stream, a delightful little babbling brook of sparkling water, was not more than half a mile in length its source being a typical outcrop from some subterranean supply in the sandy bed of the storm channel; yet further up are two more small streams, each about a quarter to half a mile in length, rising up out of the channel bed and disappearing as suddenly into it at the end of their courses. Round these latter the valley was thickly wooded with the *Ghaf* or dwarf poplar.

With so plentiful a water supply throughout the year the valley is naturally a very popular resort not only with shepherds but with agricultural tenants from Hilwa, who cultivate an extensive area of wheat among the ruins of the old settlement, so far as I could judge something between 100 and 150 acres in all. Of the history of the settlement and its decay and of the reason for its present occupation by the people of Hilwa I was unable to obtain any account. There is, of course, no permanent population, but such parts of the *qasrs* as are undamaged and one or two miserable huts are temporarily occupied each year by tenants sent out from Hilwa.

Breaking camp on the morning of June 22 we retraced our steps down the Mawan valley to the point where we had entered it and thence struck rather west of north into and up the Tuwaiq slope. At three miles from this point we crossed the Suwais Shaib and four miles further on entered the valley of Ain. Up to this point our view to the east and north-east embraced the Kharj valley to the far off ridge of Firzan and to the Biyadh ridge, while to the west the plateau stretched monotonously as far as we could see.

We now followed up the pebbly storm channel of Shaib Ain running through a valley a quarter of a mile broad and girt in on either side by steep cliffs some fifty to eighty feet in height. Up and down the valley were scattered patches of dwarf poplars in and around which were pitched the black tents of a considerable gathering of Al Shamir, the main tribal unit of the Alaiya section of Tuwaiq. Water is here abundant at a depth of not more than two feet below the surface of the storm channel, and at intervals we passed little groups of temporary wells lined with stones and scooped out to a depth of two or three

feet, beside which under the grateful shade of the poplars lolled idle groups of Arabs eking out the weary hours of the long fast.

Making our midday halt near some unoccupied wells of this description we pursued our course later in the afternoon up Shaib Ghuwianam, a small and tortuous tributary of the Ain, and after a march of nearly two miles to its head climbed out of it by a steep path to the plateau, here about 2,400 feet above sea-level. At rather less than two miles further on we came to a rise in the level of the plateau (about 2,570 feet above sea-level) from which we commanded a magnificent view right back to the ridge of Jebel Alaiya on the west and over the ridges encircling the Kharj valley on the east, while ahead of us beyond the ridges of the Nisah valley appeared the distant summit of the Jubeil ridge.

Descending from this eminence for about one and a half miles we camped for the night in the first of the Balajin depressions and crossing the remaining two on the following morning finally passed out of the Alaiya section of Tuwaiq into the broad valley of Shaib Nisah, which as I have already noted is a great level-crossing through the barrier of Tuwaiq and brings down the drainage of part of the plains and hills of Nejd proper. The valley was here nearly a mile broad and of a sandy character, running almost due west and east between low lumpy ridges.

Pushing on across the Nisah we ascended the hilly mass of the ridge on its left bank and soon found ourselves on the Aridh plateau with a view down on to the Wadi Hanifa and the ridges behind it ending in Jubeil on the right and a monotonous expanse of plateau on the left. In front of us at some distance lay a low black lump, the ridge of Abda, rising abruptly out of the sloping plateau.

Reaching the Abda ridge after a march of six miles in a north-west direction from the edge of the Nisah valley we descended a steep slope, partly rock and partly loose sand, into the Dahu depression, whose exit into the Wadi Hanifa lay a short distance to our right. On our left hand the important Shaib of Baaija, which appears to receive part of the drainage of the Dhruma plain through the Ausat Shaib, ran down into the depression along a depressed ridge and re-entered the Tuwaiq at its further extremity. Striking across the Dahu depression and entering the Baaija at this point, we marched down the valley of the latter slightly west of north between high rock cliffs

and soon found ourselves once more in view of the palms of Hair. At Hair, reached after a total march of 293 miles from the wadi, we camped for the night finding but little change from the state in which we had left it a month and a half before, except that the dates had increased in size though they were still far from ripe, while the stream had ceased to flow and the pond had sunk to less magnificent proportions.

My aneroid, whose highest reading on the previous occasion had been 1,800 feet above sea-level, now gave a minimum reading of 2,050 feet, though a comparison of the climatic conditions prevailing on either occasion might lead one to expect a reversal of the record, my weather notes on the first occasion showing a south wind, distant thunderstorm and a very small fall of rain, while on this occasion day and night were uninterruptedly fine with a good deal of north wind. The following comparative table of thermometer readings recorded on the two occasions shows the rise in temperature which had taken place in the interval between our two visits:—

Time.	May 6 to 7.	June 23 to 24.
7.0 p.m.	89·96	98·6
9.0 „	87·44	95·9
11.0 „	83·48	87·8*
4.30 a.m.	71·96	78·98

While on the subject of climate it will be convenient to make a brief survey of the weather conditions found to obtain on the Tuwaiq plateau from June 7, when I entered it at its southern end, to June 23, when I arrived at Hair. The period falls into two well marked divisions, the day on which we passed the northern boundary of the Aflaj hill district bringing a complete change both in the temperature and in general climatic conditions. With so little in the way of data to go upon it is difficult to say whether this difference is a permanent feature or not, but it seems to me, both from my own observations and from popular ideas on the subject, not unlikely that there is a well-marked line of more or less permanent differentiation between the climates of the upper and lower districts of Southern Nejd, the boundary between these two divisions for these purposes seeming to me to run from the Hunnu Shaib on the south of the Aflaj plain district along the slope of Tuwaiq between the hill and

* At 11.30 p.m. the temperature had suddenly dropped to 79·16.

plain districts up to, and then westward along, the Birk. The "hot" zone would thus include Aridh, Kharj, Alfara, and the plain district of the Aflaj, while the hill district of the latter, the Tuwaiq plateau south of it, Sulaiyyil and the wadi would fall into the "cool" zone. During the period from June 7 and June 15, spent in traversing the three most southerly section of Tuwaiq, the prevailing wind was from the north and of varying steadiness and intensity, a normal daily record being somewhat as follows :—

From 4 a.m. to 7 a.m.—no wind.

From 7 a.m. to noon—light north wind gradually increasing in intensity.

From noon to 4 p.m.—north wind strong and gusty.

From 4 p.m. to 6 p.m.—moderate to light north wind.

From 7 p.m. to 4 a.m.—no wind.

The average maximum and minimum temperatures for this period were 102·2 and 65·96 respectively, the lowest maximum and highest minimum recorded were respectively 95·90 and 73·40 (both curiously enough on the same day, namely June 12) ; while the lowest minimum and highest maximum touched were, respectively 59·52 and 105·8 (again both on the same day, namely, June 10). The average temperature at 8 p.m. was 85·1 and between 11 p.m. and midnight 76. It will be seen from this record that the climatic conditions experienced during the second fortnight of June were about as pleasant as one could reasonably expect at such a season between latitudes 21° and 23½° in a country accounted tropical.

These conditions, however, underwent a distinct change for the worse in the second period extending from June 19 to June 23, during which, it should be observed, we were very near to, or actually outside, the eastern boundary of Tuwaiq. The wind now became very uncertain with a prevailing tendency to come from the south-west or south. The lowest temperature recorded was 65·30 on June 19, the highest 112·10 on the following day at the mouth of the Fara, the average maximum and minimum were 110·41 and 71·10 respectively ; while at 8 p.m. and midnight the average readings were respectively 86 and 80·3. Even such a record compares very favourably with what one is accustomed to at this season in Mesopotamia and India.

On the morning of June 24 we broke camp for the last time and, varying our route, proceeded up Shaib Ha for some two miles, whence we ascended an unimportant, but extremely tortuous and difficult boulder-strewn ravine, reaching the top of which we found ourselves once more on the plateau. To the right lay the Wadi Hanifa backed in the distance by the Jubeil ridge, to the left and in front extended the plateau ending on the west in a somewhat elevated ridge. We now followed a well-marked track running slightly west of north and gradually sloping downwards to the broad valley of Hanifa, which we re-entered soon after crossing the Shaib Baqra. From this point our route lay up the valley more or less along the track of our outward journey, the palms of the Riyadh oasis, of which we had obtained a first glimpse before descending from the plateau, gradually emerging again into view as we rose to higher ground. Passing the ruins of Jiza we reached the Mizal *qasr* and thence followed close along the palm-belt rather to the west of our outward route and past the village of Masana to Manfuha where we halted until the hour appointed for our entry into the capital.

About 4 o'clock in the afternoon we resumed our march across the bare ridge separating the two oasis; an hour later we rode in through the north-east gate of the Wahhabi capital, now prostrate under the rigours of the Wahhabi fast, and alighted before the palace of Ibn Saud.

Exactly fifty days had passed since we rode out of Riyadh, and in that space we had travelled some 640 miles—331 miles from Riyadh to Faraa in the wadi and 309 miles back from the capital of the wadi to the capital of Nejd.

H. ST. J. B. PHILBY.

Riyadh,

July 9, 1918.

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